

Canon

Laser Beam Printer

LBP-2000

User's Guide



Please read this guide before operating this equipment.
After you finish reading this guide, store it in a safe place for future reference.

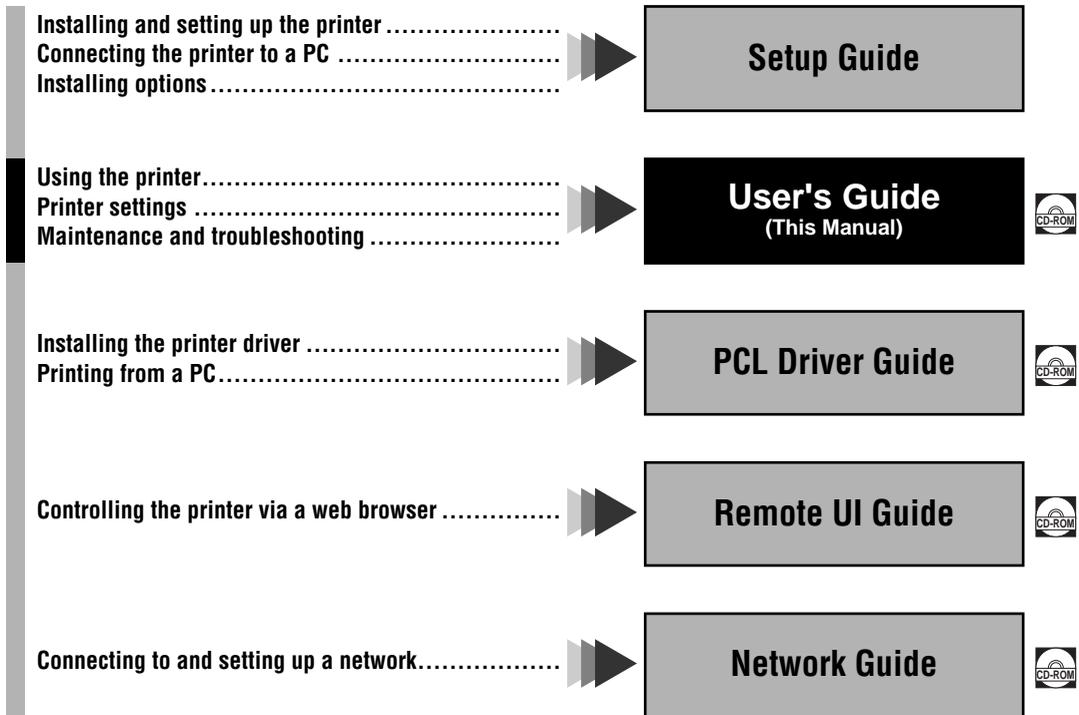
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**Canon Laser Beam Printer
LBP-2000
User's Guide**



About the Manuals for the Machine

The manuals for this machine are divided as follows. Use this chart to help you find the information you require.



The manuals supplied with optional equipment are included in the list above.

Depending on the system configuration and product purchased, some manuals may be unavailable (irrelevant).

• The photograph of the product on the cover may differ from the actual product.



The volumes marked with this symbol are PDF manuals included in accompanying CD-ROMs.



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Lists the main specifications, glossary, maintenance agreement and index.

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- Some of the data contained herein may not exactly reflect the current model of the particular product with which this manual has been included. If you have a need for an exact specification, please contact Canon for the current specification.
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Preface

Thank you for purchasing the Canon LBP-2000. Please read this manual thoroughly before operating the LBP-2000 in order to familiarize yourself with its capabilities, and to make the most of its many functions. After reading this manual store it in a safe place for future reference.

How to Use This Manual

Symbols Used in This Manual

The following marks are used in this manual to indicate safety precautions, restrictions and notices for handling the product.

- | | |
|----------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  WARNING | Indicates a warning concerning operations that may lead to death or injury to persons if not performed correctly. In order to use the machine safely, always pay attention to these warnings. |
|  CAUTION | Indicates a caution concerning operations that may lead to injury to persons or damage to property if not performed correctly. In order to use the machine safely, always pay attention to these cautions. |
|  IMPORTANT | Indicates operational warnings and restrictions. Be certain to read these items to operate the machine correctly, and to avoid damage to the machine. |
|  NOTE | Indicates notes for operation or additional explanations. Reading these is recommended. |

Keys Used in This Manual

The following symbols, key names and unit names are used in this manual.

- Control panel keys [Go]

Illustrations Used in This Manual

Unless otherwise mentioned, illustrations used in this manual are those taken when the optional network card, and hard disk are installed on the printer.

Abbreviations Used in This Manual

In this manual, product names and model names are abbreviated as follows:

Microsoft® Windows® operating system is referred to as Windows.
Canon Laser Beam Printer LBP-2000 is referred to as the LBP-2000.

FCC (Federal Communications Commission) Class B

Laser Beam Printer, Model F140903

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and use in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Do not make any changes or modifications to the equipment unless otherwise specified in the manual. If such changes or modifications should be made, you could be required to stop operation of the equipment.

Safety Information

This section lists important safety information and precautions about handling the machine. Be sure to read this information before using the machine for the first time.

Laser Safety Information

Laser radiation could be hazardous to the human body. For this reason, laser radiation emitted inside this printer is hermetically sealed within the protective housing and external cover. No radiation can leak from the machine in the normal operation of the product by the user.

This printer is classified as a Class 1 laser product under EN 60825-1: 1994, and as for the U.S.A., it is classified as Class I under the Code of Federal Regulations, 1040.10 of Title 21.



This printer has been classified under EN60825-1: 1994 and conforms to the following classes:

CLASS 1 LASER PRODUCT
LASER KLASSE 1
APPAREIL A RAYONNEMENT LASER DE CLASSE 1
APPARECCHIO LASER DI CLASSE 1
PRODUCTO LASER DE CLASE 1
APARELHO A LASER DE CLASSE 1

CAUTION

- Performance of procedures other than those specified in this guide may result in hazardous radiation exposure.

International Energy Star-Program



As an ENERGY STAR® Partner, Canon USA, Inc. has determined that this product meets the ENERGY STAR® Program for energy efficiency.

The International ENERGY STAR® Office Equipment Program is an international program that promotes energy saving through the use of computers and other office equipment. The program backs the development and dissemination of products with functions that effectively reduce energy consumption. It is an open system in which business proprietors can participate voluntarily. The targeted products are office equipment such as computers, displays, printers, facsimiles, and copiers. Their standards and logos are uniform among participating nations.

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UNIX is a registered trademark exclusively licensed from X/Open Company, Ltd. in the United States and other countries.

Ethernet is a trademark of Xerox Corporation, Inc. (US)

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Important Safety Instructions

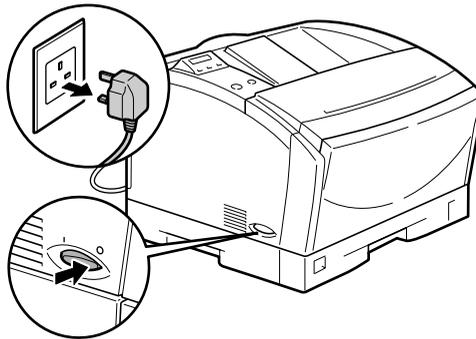
Installation

WARNING

- Do not install the machine near alcohol, paint thinner or other inflammable substances. If inflammable substances come into contact with electrical parts inside the machine, this may result in a fire or electrical shock.
- Do not place the following items on the machine. If these items come into contact with a high-voltage area inside the machine, this may result in a fire or electrical shock.

If these items are dropped or spilled inside the machine, immediately turn off the power switch on the printer, then the main power switch, and unplug the power plug from the outlet. Then, contact your service representative or the shop that you purchased this product.

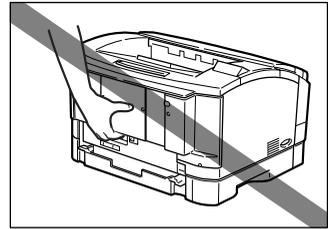
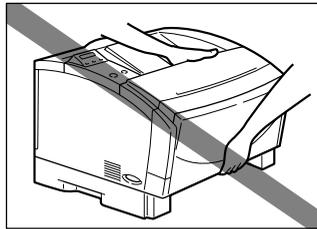
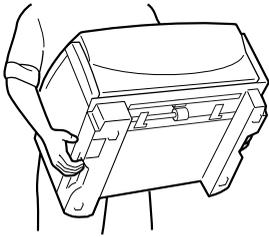
- Necklaces and other metal objects
- Cups, vases, flowerpots and other containers filled with water or liquids



CAUTION

- Do not install the machine in unstable locations such as on unsteady platforms or on inclined floors, or in locations which are subject to excessive vibrations, as this may cause the machine to fall or tip over, resulting in personal injury.
- Never block the ventilation slots and louvers on the machine. These openings are provided for proper ventilation of working parts inside the machine. Blocking these openings can cause the machine to overheat, so never place the machine on a soft surface like a sofa, rug or similar surface.
- Do not install the machine in the following locations.
 - A damp or dusty location.
 - A location exposed to smoke and steam such as cookeries and humidifiers.
 - A location exposed to rain and snow.

- A location near water faucets and water.
 - A location which is exposed to direct sunlight.
 - A location subject to high temperatures.
 - A location that is subject to open flames.
- To avoid damaging the printer or personal injury, carry the printer in the manner shown in the illustration, after removing any paper cassettes. Hold it firmly, with one hand on each side.
 - When connecting the interface cable, connect it properly according to this guide. If not connected properly, this might result in malfunction or electrical shock.
 - If a problem or error occurs on the optional hard disk, the data stored on the hard disk may be lost. Be sure to keep backup copies, on external media, of any important data or files that have been stored on the optional hard disk. Canon cannot accept any responsibility for any loss of data arising from the use of or inability to use the optional hard disk.
 - When moving the printer, follow the instructions in this manual to hold it correctly. Failure to do so may cause you to drop the printer, resulting in personal injury.



Power Supply

⚠ WARNING

- Do not damage or modify the power cord. Also, do not place heavy objects on the power cord, or pull on or excessively bend it, as this could cause electrical damage and result in a fire or electrical shock.
- Keep the power cord away from a heat source; failure to do this causes the cord coating to melt and results in fire or electrical shock.
- Do not insert or unplug the power plug with wet hands, as this may result in electrical shock.
- Do not plug the machine into a multi-plug power strip, as this may cause a fire or electrical shock.
- Do not bundle up or tie the power cord in a knot, as this may result in a fire or electrical shock.
- Insert the power cord completely into the outlet, as failure to do so may result in a fire or electrical shock.

- As a general rule, do not use extension cords. Using an extension cord may result in a fire or electrical shock. If an extension cord must be used, however, use the type rated for voltages of AC 230 V and over and untie the cord binding and insert the power plug completely into the extension cord outlet to ensure a firm connection between the power and extension cords.

CAUTION

- Do not use power supplies with voltages other than those specified, as this may result in a fire or electrical shock.
- Always grasp the plug portion when unplugging the power plug. Pulling on the power cord may expose or snap the core wire, or otherwise damage the power cord. If the cord is damaged, this could cause an electricity leak and result in a fire or electrical shock.
- Leave sufficient space around the power plug so that it can be unplugged easily. If objects are placed around the power plug, you will be unable to unplug it in an emergency.

Handling

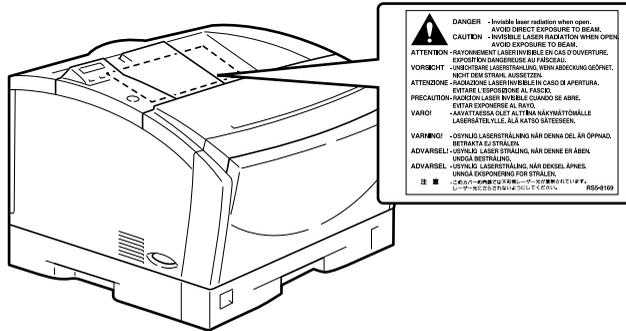
WARNING

- Do not attempt to disassemble or modify the machine. There are high-temperature and high-voltage components inside the machine, which may result in a fire or electrical shock.
- Electrical equipment can be hazardous if not used properly. To avoid injury, do not allow children access to the interior of any electrical product and do not let them touch any electrical contacts or gears that are exposed.
- If the machine makes strange noises, or emits smoke, heat or unusual smells, immediately turn off the Control Panel Power Switch, then the main power switch, and unplug the power plug from the outlet. Then, contact your service representative or the shop that you purchased this product. Continued use of the machine in this condition may result in a fire or electrical shock.
- Do not use highly flammable sprays near the machine. If gas from these sprays comes into contact with the electrical components inside the machine, this may result in a fire or electrical shock.
- To avoid damage to the power cord and creating a fire hazard, always turn the main power switch to off, and unplug the interface cable when moving the machine. Or else, power cord and interface cable may be damaged and will lead to fire or electrical shock.
- Do not drop paper clips, staples or other metal objects inside the machine. Also, do not spill water, liquids or flammable substances (alcohol, benzene, paint thinner, etc.) inside the machine. If these items come into contact with a high-voltage area inside the machine, this may result in a fire or electrical shock. If these items are dropped or spilled inside the machine, immediately turn the main power switch to OFF and unplug the power plug from the outlet. Then contact your service representative or the shop you purchased the machine.
- When connecting the printer to the USB interface when the power switch is on, be sure to connect the grounding cord to avoid electrical shock.

- When unplugging the USB cable while the power switch is on, do not touch the metal part of the connector. This may lead to electrical shock.

⚠ CAUTION

- Do not place heavy objects on the machine, as they may tip over or fall resulting in personal injury.
- When handling the main board, expansion board, RAM, or ROM, be careful not to cut your hand by touching the corner and sharp parts.
- Turn off the main power switch for safety when the machine will not be used for a long period of time such as overnight. Also, turn the control panel power switch and the main power switch on the right of the machine and unplug the power plug for safety when the machine will not be used for an extended period of time such as during consecutive holidays.
- Laser beam may be harmful to human bodies. Since radiation emitted inside the product is completely confined within protective housings and external covers, the laser beam can not escape from the machine during any phase of user operation. Read the following remarks and following instructions for safety.
- Never open covers other than those instructed in this manual.



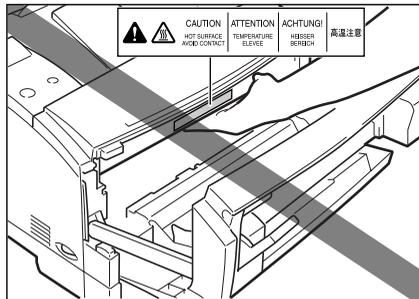
Maintenance and Inspections

⚠ WARNING

- When cleaning the machine, first turn OFF the main power switch, then unplug the power plug. Failure to observe these steps may result in a fire or electrical shock.
- Unplug the power plug from the outlet regularly, and clean the area around the base of the plug's metal pins and the power outlet with a dry cloth to ensure all dust and grime is removed. If the machine is plugged in for a long time in a damp, dusty, or fume location, dust can build up around the plug and become damp. This may cause a short circuit and result in a fire.
- There are some areas inside the machine which are subject to high voltages. When removing jammed paper or when inspecting the inside of the machine, do not allow necklaces, bracelets or other metal objects to touch the inside of the machine, as this may result in burns or electrical shock.
- Do not throw used toner cartridges into open fires. The toner will catch on fire and may cause burns or fire.

⚠ CAUTION

- The fixing unit and its surroundings inside the machine may become hot during use. When removing jammed paper or when inspecting the inside of the machine, do not touch the fixing unit and its surroundings, as this may result in burns or electrical shock.



- When removing jammed paper or replacing the toner cartridge, take care not to allow the toner to come into contact with your hands or clothing, as this will dirty your hands or clothing. If they become dirty, wash them immediately with cold water. Washing with warm water will set the toner and make it impossible to remove the toner stains.
- When removing paper which has become jammed inside the machine, remove the jammed paper gently to prevent the toner on the paper from scattering and entering your eyes or mouth. If toner enters your eyes or mouth, wash immediately with cold water and consult a physician.
- When loading paper or removing jammed paper, take care not to cut your hands on the edges of the paper.
- When removing used toner cartridges from the toner cartridge slot, remove the cartridge carefully to prevent the toner from scattering and entering your eyes or mouth. If the toner enters your eyes or mouth, wash immediately with cold water and consult a physician.

Consumables

⚠ WARNING

- Do not throw used toner cartridges into open flames, as this may cause toner remaining inside the cartridges to ignite and result in burns or a fire.
- Do not store toner cartridges or copy paper in places exposed to open flames, as this may cause the toner or paper to ignite and result in burns or a fire.

⚠ CAUTION

- Keep toner and other consumables out of the reach of small children. If these items are ingested, consult a physician immediately.

Legal Limitation on Usage of Your Product and the Use of Images

Using your product to scan, print or otherwise reproduce certain documents, and the use of such images as scanned, printed or otherwise reproduced by your product, may be prohibited by law and may result in criminal and/or civil liability. A non-exhaustive list of these documents is set forth below. This list is intended to be a guide only. If you are uncertain about the legality of using your product to scan, print or otherwise reproduce any particular document, and/or of the use of the images scanned, printed or otherwise reproduced, you should consult in advance with your legal advisor for guidance.

- Paper Money
- Money Orders
- Certificates of Deposit
- Postage Stamps (cancelled or uncanceled)
- Identifying Badges or Insignias
- Selective Service or Draft Papers
- Checks or Drafts Issued by Governmental Agencies
- Motor Vehicle Licenses and Certificates of Title
- Travelers Checks
- Food Stamps
- Passports
- Immigration Papers
- Internal Revenue Stamps (cancelled or uncanceled)
- Bonds or Other Certificates of Indebtedness
- Stock Certificates
- Copyrighted Works/Works of Art without Permission of Copyright Owner

Before You Start Using the Machine

1

CHAPTER

This chapter describes the major features and the functions of the printer.

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Features of the Product

Your printer offers fast printing speed, superior print quality, sophisticated paper handling, and ecology- and energy-sensitive features. The printer also accommodates hardware options to meet your networking requirements.

Standard Features

High-speed Printing

The Power PC405 processor enables a print speed of up to 20 pages per minute (ppm) for Letter- or A4-size paper.

Superior Print Quality

High resolution printing at 600 dpi (dots per inch) is further enhanced by Automatic Image Refinement to smooth jagged edges along with the use of super fine toner. Combined, these will ensure superior reproduction quality of text and graphics.

Software Compatibility and Language Switching

The printer supports Hewlett-Packard's PCL 5e and PCL6 printer languages, which enables the printer to work with a wide variety of software applications supporting PCL. The printer can also support Adobe PostScript® 3™, which allows you to print PostScript data files at 600 dpi. With the optional Canon Adobe PostScript® 3™ Module A-65 (an add-in ROM for Adobe PostScript 3) installed, the printer can sample the print data as it is received and then automatically switch between the PCL and PostScript personalities.

Memory Saving Technology

Memory Reduction Technology accomplishes 600 dpi printing with only 8 MB of memory for Letter- or A4-printing. Complex page data is compressed to optimise available resources.

Paper Handling

The standard paper cassette holds 250 sheets of paper while the Multi-Purpose tray holds about 100 sheets of standard-size paper. The tray can hold a variety of media for automatic feeding and operate as a manual feed station.

In addition, there are optional paper feed units to greatly increase your printing capacity: up to three Canon Paper Feed Unit PF-65s can be installed.

Energy Saving

The on-demand fusing technology of the printer provides improved energy efficiency. Because of this power saving feature, the printer meets the guidelines for the International Energy Star Program.

Reducing Toner Consumption

To save toner, you can select the economy mode to print rough drafts with less toner. The printed page is much lighter, similar to the draft mode found on many dot matrix printers.

Interface Features

The printer has a standard IEEE 1284 compatible parallel interface, which supports ECP and Compatible/Nibble protocols. It also supports Microsoft's Plug & Play technology. The printer also has a USB port for easy connection to a personal computer or other USB devices. You can also insert a network card into the expansion slot to enable network printing.

Typefaces

The printer comes with 45 scalable typefaces in 16 typeface families (Agfa 45 MicroType fonts) and 32 additional TrueType fonts (barcode and OCR fonts), all compatible with application software supporting Microsoft Windows. In addition, 9 bitmapped typefaces of the Line Printer family are also included. The printer uses the Universal Font Scaling Technology (UFST) for outline fonts, provided under license from Agfa Monotype Corporation. Also supplied with the printer are the TrueType screen fonts for 137 font solution and Canon Font Manager for easy management of installed fonts in Microsoft® Windows® 95/98/Me and Windows NT 4.0/2000. A list of typeface samples is provided in the Appendix.

Printer drivers and Utilities

The printer comes with PCL printer drivers for Microsoft Windows 95/98/Me and Windows NT 4.0/2000. This allows you to control most printer settings from the Windows driver screens.

Remote UI Support

The printer supports a Remote UI function that allows you to control or monitor the status of the printer from a personal computer. (See the Remote UI Guide.)

E-mail Notification

The printer can notify you by e-mail when a job has finished printing, or if an error occurs. (See the Remote UI Guide.)

Optional Equipment

Below is a list of the options available for installation with this printer. For more details, contact your local supplier.

Adobe PostScript 3

The software that enables your printer to perform Adobe PostScript 3 printing is supplied in the Canon Adobe PostScript® 3™ Module A-65 (hereafter referred to as the PostScript module) as an optional ROM. This software includes a total of 136 fonts. (Typeface samples are shown in Chapter 10.) The module comes with Adobe PostScript 3 printer drivers for Macintosh OS computers, Microsoft Windows 95/98/Me, and Windows NT 4.0/2000.

250 Sheet Paper Feed Unit

The Canon Paper Feed Unit PF-65 units are designed for high volume printing and sit underneath the universal paper cassette. Each unit holds 250 sheets (80 g/m² or 21 lb. paper) and can be adjusted to accept different sizes of paper, up to Legal-size. Up to three 250-sheet paper feed units can be installed under the printer.

Flash ROM Module

Easily installed in the printer, this increases the amount of memory available for the storage of fonts and macros in the printer.

RAM DIMM Modules

Easily installed in the printer, these increase the amount of memory available to the printer. If using third-party RAM, use Intel PC 100 compatible SDRAM 144-pin SO-DIMM.

Network Card

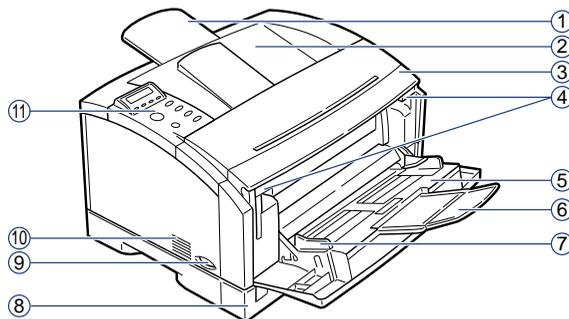
With the optional Canon Ethernet Board EB-65, your printer can handle network jobs by connecting the printer to your network using a Category 5 twisted pair LAN cable.

Parts and Their Functions

The following section describes the parts of the printer, and their various functions, so that you can make full use of all the features of your printer.

Parts of the Printer

Front View



① Extension Tray

Extend when loading B4-, A3-, or other large-sized paper to prevent it from drooping.

② Face-down Tray

Holds approximately 250 printed sheets (80 g/m² or 21 lb.) delivered face down and collated. (See p.3-11)

③ Front Cover

Open to install the toner cartridge, clear paper jams, and for printer maintenance. (See p.8-20),

④ Release Levers

Release the locks of the front cover. Pull down both levers to pull out the front cover. (See p.8-2),

⑤ Multi-Purpose Tray

Holds a variety of print media such as plain paper, envelopes, labels, transparencies and non-standard size paper. The capacity is approximately 100 sheets of plain paper (80 g/m² or 21 lb.) (See p.3-17)

⑥ Extension Support

Supports large-sized paper.

⑦ Paper Size Guides

Adjust to the size of the paper loaded in the multi-purpose tray. The guides can easily be adjusted by hand.

⑧ Universal Paper Cassette

You can load up to 250 sheets of plain paper with the size of A5 to A3.

⑨ Power Switch

Press to turn the printer on or off. (See p.2-2)

⑩ Ventilation Slots

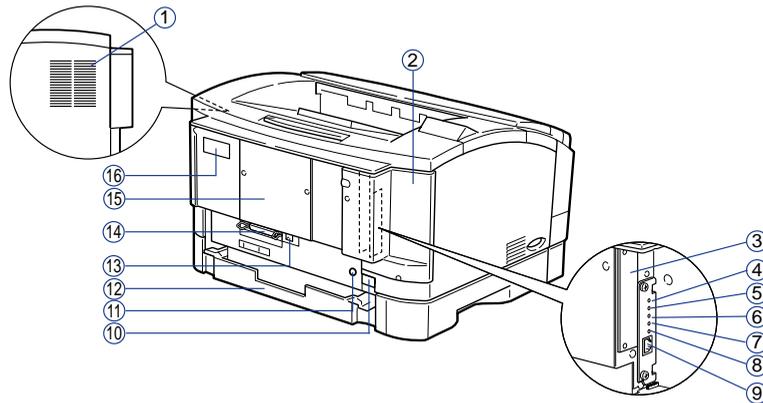
Slots ventilating the air blown by the fan cooling the printer interior. Install the printer so as not to block these slots.

⑪ Control Panel

This indicates the operations and status of the printer, as well as configures the functions. (See p.1-8)

- Before using the control panel, peel off the protective film from the display.

Rear View



① Ventilation Slots

Slots ventilating the air blown by the fan cooling the printer interior. Install the printer so as not to block these slots.

② Expansion Board Slot Cover

Cover protecting the expansion board slot. Use the printer with this cover attached.

③ Expansion Board Slot

Install optional expansion boards here, such as the hard disk, etc.

④ ERR LED

Lights or blinks when the optional Ethernet board is operating incorrectly.

⑤ LNK LED

Lights when the optional Ethernet board is correctly connected to a network.

⑥ 100 LED

Lights when the optional Ethernet board is connected to a network via a 100BASE-TX. Does not light when connected to a 10BASE-T.

⑦ TXD LED

Lights when the optional Ethernet board is transmitting data.

⑧ RXD LED

Lights when the optional Ethernet board is receiving data.

⑨ LAN Connector

Connect to a 10BASE-T/100BASE-TX LAN cable.

⑩ Power Socket

Connects to an AC outlet.

⑪ Grounding Wire Terminal

Connect a commercially available grounding wire to this terminal.

⑫ Universal Paper Cassette Rear Side

Rear side of universal paper cassette. Do not grasp this to lift the printer.

⑬ USB Connector

Connect to a USB interface cable. Use this port when connecting to a computer with a USB interface.

⑭ Parallel Connector

Use this port when connecting to a computer with the printer cable.

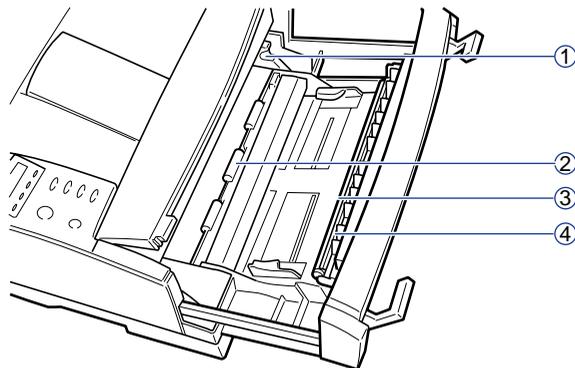
⑮ Expansion Board Slot Cover

Cover protecting the expansion board slot. Use the printer with this cover attached.

⑯ Rating Label

The serial number is indicated to identify the printer. Refer to this number when calling a service technician. This label also shows the current and average power consumption.

Inside the Front Cover



① Toner Cartridge Compartment

Holds the Canon EP-65 Toner Cartridge. Align the toner cartridge with the guides inside the compartment.

② Paper Feed Roller

Located inside the printer, the transfer guide area and registration roller area should be cleaned periodically with a damp cloth to remove any paper dust collected on the plate or transparent sheet.

③ Transfer Roller

This delicate roller should be kept free of fingerprints and oil to prevent print quality deterioration.

- To ensure optimum print quality, never touch the transfer charging roller or attempt to clean it.

④ Discharger

An important part that releases the electronic charge from paper during printing.

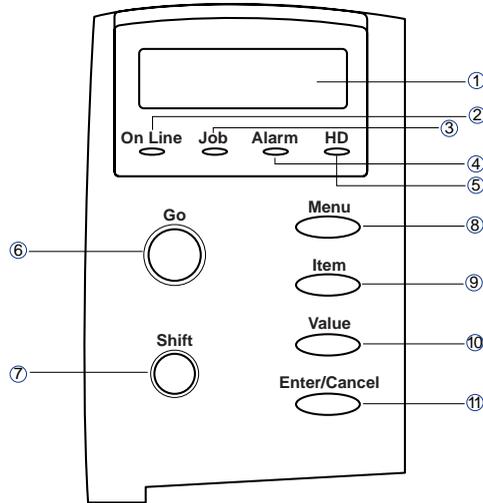
- Do not touch the discharger with your hands. Otherwise, print quality may deteriorate.

Printer Control Panel

Located at the front on top of the printer, the control panel features: an LCD display and four status indicators at the top; and six operation keys below the display. The functions of the indicators, operation keys, and displays are as follows.

1

Before You Start Using the Machine



① LCD Display

The two-line, 16-digit display tells you what is happening inside the printer and shows you the menus and settings that can be changed. The display informs you about the printer's operational status, allows you to make menu selections, warns you about problems, and identifies errors.

② On Line Indicator (green)

On:
The printer is on-line (power on, warmed up and ready to receive data for printing). Before you send a print job, this indicator must be on.

Blinking:

The printer is processing a print job. Do not turn the power off, otherwise you may lose print data. The page is printed when all of the data has been processed.

Off:

The printer is off-line. You can now use the printer control panel buttons to view and change settings. When off-line, the printer cannot accept data for printing.

③ Job Indicator (green)

On:

Part of a page has been processed and stored in the printer's memory.

Off:

There is no data stored in the printer's memory.

④ Alarm Indicator (orange)

On:

An error has occurred and printing has stopped. Check the display for a message describing the problem.

Off:

Operation is normal and there is no error.

If the printer enters Sleep Mode while off-line, only the Alarm indicator (orange) lights, with other indicators extinguishing.

⑤ HD Indicator (green)

On:

Indicates that the optional Canon Hard Disk HD-65 has been installed,

Blinking:

The hard disk is being accessed.

Off:

Indicates that there is no optional hard disk installed.

- If a problem occurs on the optional hard disk, the data stored on the hard disk may be lost. Be sure to keep backup copies, on external media, of any important data or files that have been stored on the hard disk. Canon cannot accept any responsibility for any loss of data arising from the use of, or inability to use, the hard disk.

⑥ [Go] Key

Takes the printer off-line and brings it back on-line. When the On Line indicator is on, the printer is ready to receive data and print. When the On Line indicator is off, the printer is off-line and you can use the other buttons on the printer control panel to view and change settings.

Resumes printing after the printer stops printing and displays a message. For most situations, after you press [Go] the message clears and printing resumes. When the multi-purpose tray is being used as a manual feed station (<MANUAL=ON> in the FEEDER MENU), press [Go] each time you feed a single sheet of paper.

- To perform a form feed and print any data remaining in the printer, press Go twice in succession.
- To reset the printer settings to their default values, press and hold this button while turning on the printer. This resets all settings except the PAGE COUNT field on the TEST PRINT page.

⑦ [Shift] Key

Press this button to scroll through menu or settings items in reverse order.

⑧ [Menu] Key

When the printer is off-line, press [Menu] to scroll through the menu names and return to the first menu name. To scroll through menu names in reverse order, press [Shift] and [Menu].

Depending on what options you have installed, some menu names may not appear.

⑨ [Item] Key

With a menu name displayed, press [Item] to scroll through all the items in a menu and return to the first item. To scroll through the items in reverse order, press [Shift] and [Item].

- Depending on what options you have installed, some items may not appear.

⑩ [Value] Key

With an item name displayed, press [Value] to scroll through the item's values. Press [Shift] and [Value] to step through the values in reverse order. Some items have a large range of numbers from which to choose a value. For example, for COPIES you can set a value from 1 to 999. In this case, to quickly scroll through the values, press and hold down "Value."

⑪ [Enter] Key

Saves a value you selected for an item in the menu. An asterisk (*) marks the current default setting.

[Cancel] Key

Press [Shift] and [Enter/Cancel] to cancel the current operation.

- If a cancel operation is performed while the printer is receiving data, this will cause the input data to be flushed from the printer's memory. In this case, <READY/FLUSHING> will appear on the display while the data is being flushed. <READY> appears after the data has been flushed from memory.

Using the Printer

2

CHAPTER

This chapter describes the basics of how to use the printer.

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About On-line and Off-line	2-6
On-line	2-6
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Cancelling a Print Job.	2-8

Turning the Printer On/Off

This section describes how to turn the printer on and off.

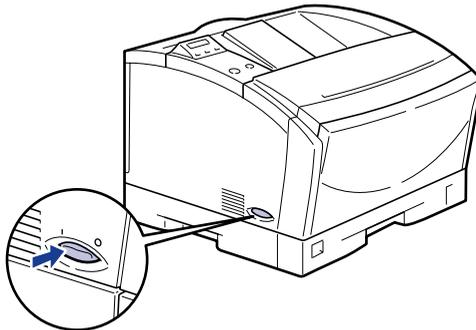
Turning On the Printer

When you turn the printer on, the printer performs a self-diagnostic test to check the status of the printer and any options installed.

IMPORTANT

- Insert the paper cassette before turning the power on when the printer is being turned on for the first time after it has been installed.
- A blank sheet of paper may be discharged when the power is turned on for the first time after the printer has been installed. This is normal, and is not a malfunction.

- 1 Press the “I” side of the power switch located on the left side of the printer.**

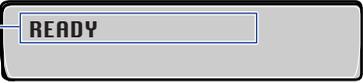


When the power is turned on, the indicators and the LCD display on the control panel are turned on. Then, the printer performs a self-diagnostic test to check the status of the printer and any options installed.

If there are no errors found, the On Line indicator lights up, and the printer is ready to print.

The information shown on the LCD display is as follows:

Ready to print and no data is being processed for printing.



READY



IMPORTANT

- See "Printer Trouble," on p.9-4 if the printer does not operate normally or an error message is shown.

Turning Off the Printer

The printer should be turned off as described in the following procedure. The procedure for turning off the power differs depending on whether or not the optional hard disk has been installed.



IMPORTANT

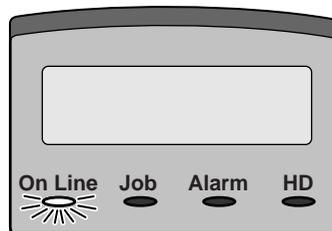
- If the printer has the optional hard disk installed, turning off the power should follow the designated procedure to protect the hard disk.(See "If the Printer is Using a Hard Disk," on p.2-4)
- If the printer is connected to a network, make sure that the printer is not printing data from another personal computer before turning off the power.
- If the power is turned off while the job indicator is on, the print data remaining in the memory of the printer and the print data being spooled in the hard disk are erased. Wait for the necessary print data to be printed and turn off the power after printing has been completed. (See "Cancelling a Print Job," on p.2-8)
- Do not turn off the power to the printer while it is printing.
- Do not turn off the power to the printer during the self-diagnostic test performed immediately after the power has been turned on.
- If the printer has a hard disk installed, make sure that the HD indicator (green) is not on. If the power is turned off while the HD indicator is on (the hard disk is reading or writing data), the hard disk may be damaged and become unusable.
- If the message <Flash Memory/Initializing> or <Flash Memory/Deleting > is displayed, make sure that the message has been cancelled before turning off the power.

If the Printer is Not Using a Hard Disk

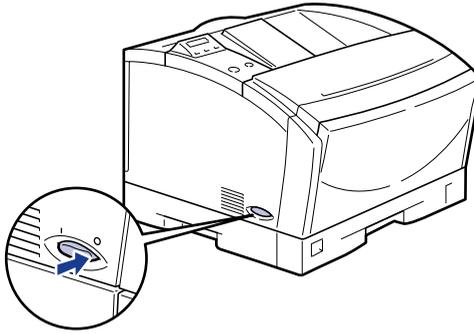
If the hard disk has not been installed on the printer, turn off the power as described in the following procedure.

1

Make sure that the job indicator is off



- 2** Press the “○” side of the power switch on the left side of the printer.



The power is turned off.

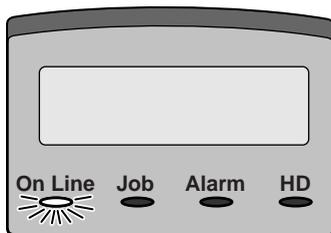
If the Printer is Using a Hard Disk

If the hard disk has been installed on the printer, turn off the power as described in the following procedure.

IMPORTANT

- If you shut down the printer when there is an aborted job or a secure print job on the hard disk, the message <JOB IN PROGRESS +CANCEL/-CONT.> is displayed. All of the jobs will be cancelled by conducting a shut down.
- Once the shut down procedure has been selected, you cannot cancel the operation. If you need to turn the printer on again, first turn off the power according to the messages, then turn the printer on again.

-
- 1** Make sure that the Job indicator and HD indicator (green) are off.



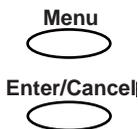
- 2** Press [Go] to turn off the On Line indicator.

The printer gets ready for settings to be entered from the control panel.



3 Press [Menu].

The first menu will be displayed.

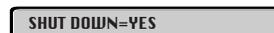


4 Select <SHUT DOWN MENU> by pressing [Menu] and then pressing [Item].

The message, <SHUT DOWN=NO> is shown.



5 Press [Value].

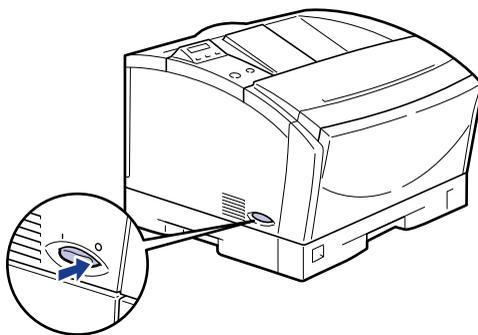


6 Check the message and press [Enter].



The process to turn off the power has been conducted and the message, <SAFE TO TURN OFF PRINTER> is shown when the printer gets ready.

7 Press the “○” side of the power switch on the left side of the printer body when the message <SAFE TO TURN OFF PRINTER> is displayed.



The power is turned off.

About On-line and Off-line

When the printer can receive data from a personal computer and is able to print the data is called <on-line>, and when the printer cannot receive data it is called <off-line>. The printer should be off-line when you operate the printer using the menu on the control panel.

On-line

The printer must be on-line in order to print data received from a personal computer. Make sure that the printer is on-line before you send a job to the printer. If the printer is not on-line, bring the printer on-line as described in the following procedure. The printer automatically comes on-line when it is turned on.



1 Press [Go] to turn on the On Line indicator.

The printer comes on-line and is ready for printing.



IMPORTANT

- If there is an error in the printer (when the Alarm indicator (orange) is on or the digit part of the message is flashing), the printer will not become on-line. Eliminate the cause of the error before bringing the printer on-line.
- The printer does not come on-line during operations such as selecting a menu function or a paper feed method, or setting the paper size. Complete the operation before bringing the printer on-line.
- Do not open the cover of the printer or remove the paper cassette while printing. If the cover is opened or the paper cassette is removed, the printer will stop printing and may not be able to resume printing again.

● Saving Power Consumption (Sleep Mode)

After a specific time period has passed without any operation or without any data sent from the personal computer, the printer automatically switches to Sleep Mode. Sleep Mode is automatically cancelled when any of the buttons on the control panel are pressed or an error occurs. Sleep Mode is also canceled if the printer has received data while it is on-line. Sleep Mode is also cancelled when the error has been cancelled while the printer is off-line.

Off-line

The printer must be off-line when you use the menu on the control panel of the printer, to select the paper feeding method or set the paper size. Check that the printer is in the off-line state before you use keys on the control panel. If not, take the printer off-line as described in the following procedure.



1 Press [Go] to turn off the On Line indicator.

The printer gets ready for operation using the control panel.



IMPORTANT

- If you try to print data from a personal computer while the printer is off-line, the message <PAUSED> is shown and the printer is not available for printing.
- The printer automatically goes on-line after being left off-line for more than five minutes. However, the printer does not come on-line when an error occurs (when the Alarm indicator (orange) is on or the digit part of the message is flashing) or during operations such as selecting a menu function or the paper feeding method, or setting the paper size.

Cancelling a Print Job

Follow the procedure below to cancel a print job.

2

Using the Printer

Enter/Cancel



Shift



- 1** To cancel a job while the printer is off-line and <PAUSED> is displayed, press [Enter] while holding down [Shift].

Input and Output of the Paper

3

CHAPTER

This chapter explains the paper available for this printer and how to load and output paper.

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Paper Requirements

This section describes the size and type of paper you can use with the printer.

Printable Paper

You can use the following types of paper with this printer. To ensure optimum performance, only use paper that falls within the specifications listed here, (X indicates that the paper type is supported, while - indicates that it is not supported.)

General Specifications

Type of Paper	Paper Source		
	Multi-Purpose Tray	Paper Cassette	250-Sheet Paper Feed Units (Option)
Plain Paper 64-90 g/m ² (17-24 lb.) A5	X	X*1	X*1
Plain Paper B5-JIS	X	X*1	X*1
Plain Paper A4	X	X	X
Plain Paper B4*2	X	X*1	X*1
Plain Paper A3*2	X	X*1	X*1
Plain Paper Letter	X	X*1	X*1
Plain Paper Executive	X	X*1	X*1
Plain Paper Legal*2	X	X*1	X*1
Plain Paper 11x17*2	X	X*1	X*1
Custom Paper*2 Width: 76.2-297mm (3"- 11 3/4") Length: 127-431 mm (5"-17")	X	-	-
Heavy Paper 91-157 g/m ² (24-32 lb.) Width: 100-297 mm (4"- 11 3/4") Length: 98-431.8 mm (3 7/8"- 17")	X	-	-
Transparencies Letter	X	-	-

Type of Paper	Paper Source		
	Multi-Purpose Tray	Paper Cassette	250-Sheet Paper Feed Units (Option)
Transparencies A4	X	–	–
Adhesive Labels Letter	X	–	–
Adhesive Labels A4	X	–	–
Monarch Envelopes *3	X	–	–
COM 10 Envelopes *3	X	–	–
C5 Envelopes *3	X	–	–
DL Envelopes *3	X	–	–

*1 Only plain paper of 64-90 g/m² (17-24 lb.) can be loaded in the paper cassette.

*2 Load the paper in portrait orientation.

*3 Envelopes can be loaded only in landscape orientation, with the flap closed.

 NOTE

- Printing speed may be reduced for settings such as paper orientation, size, type, and number of print copies.

Paper Capacity of Paper Sources

Type of Paper	Paper Source		
	Paper Feed Tray	Paper Cassette	250-Sheet Paper Feed (Option)
Plain Paper 80 g/m ² (21 lb.)	About 100 sheets *4	About 250 sheets	About 250 sheets
Heavy Paper 157 g/m ² (32 lb.)	About 50 sheets	–	–
Transparencies	About 50 sheets	–	–
Adhesive Labels	1 sheet	–	–
Envelopes	About 10 sheets	–	–

*4 Only about 50 sheets can be loaded for A3, B4, Ledger, and Legal size paper.

Paper Capacity of the Paper Delivery Tray

Type of Paper	Paper Delivery Tray
	Face-down Delivery Tray
Plain Paper 80 g/m ² (21 lb.)	About 250 sheets
Heavy Paper 157 g/m ² (32 lb.)	About 150 sheets

Type of Paper	Paper Delivery Tray
	Face-down Delivery Tray
Transparencies	About 100 sheets
Adhesive Labels	1 sheet
Envelopes	About 10 sheets

 **IMPORTANT**

- The printing speed may decrease according to the printing condition such as the type and the size of the paper used.

Abbreviations of Paper Sizes

The size indication on the paper cassettes and paper size selector of the printer uses the following abbreviations.

Paper Size	Paper size indicators on the paper cassettes and paper size selector
Ledger	11X17
Legal	LGL
Letter	LTR
Executive	EXEC

Plain White Paper

Plain white paper must meet the following general requirements:

 **IMPORTANT**

- Paper weight must meet the specifications listed in “General Specifications,” on p.3-2. Heavier or lighter paper can cause paper feed failures, paper jams and excessive wear on the printer.
- Must be precisely cut and smooth.
- Uniform physical characteristics and free of paper dust and lint.
- Paper must not be wrinkled, curled, torn, marked or have folded corners.
- Delivered in sealed packs, protected from humidity and physical damage.
- Never use any type of pre-printed paper (e.g. letterhead) that will melt, degrade, or emit fumes at high temperatures of 195 °C (413 °F).
- The stack of paper should contain only paper of the same size and weight. To avoid misfeeds and paper jams, do not mix different kinds of paper in the same stack.

Coloured Paper

Coloured paper can be used in this printer provided the following requirements are met:

 **IMPORTANT**

- The paper must be able to withstand temperatures of 190 °C (374 °F) without degradation from the printer's fixing assembly.
- The paper must be free of colour coating.
- Coloured paper should meet the same specifications for plain paper listed in the General Specifications table. (See "General Specifications," on p.3-2)

Heavy (thick) Paper

This printer can handle thick paper of 91-157 g/m² (24-32 lb.). Thick paper should be loaded on the multi-purpose tray.

 **IMPORTANT**

- The size of thick paper (91-157 g/m² or 24-32 lb.) that can be loaded in the multi-purpose tray is 100-297mm (4"-11 3/4") wide and 98-431.8mm (3 7/8"-17") long. You can load up to about 50 sheets of the paper (157g/m² or 32 lb.).

Paper You Cannot Use

To avoid problems such as paper jams and printer malfunctions, the following types of paper should never be used.

 **IMPORTANT**

- Paper that tends to cause paper jams.
 - Paper that is too thick or too thin.
 - Paper that is irregular shaped.
 - Paper that is wet or holding moisture.
 - Paper that is torn or damaged.
 - Paper that is rough, extremely smooth, or glossy.
 - Paper that has holes for binding or perforations.
 - Curled paper and paper with creases.
 - The paper that has special coating on its surface (Coated paper dedicated to ink jet printer, etc.).
 - The adhesive labels with the base easily peeled.
 - The paper that has been used once by the printer, copy machine or other laser printers (the back of that paper is also improper).
 - Paper that has fins.
 - Paper that is wrinkled.
 - Paper that is folded at corners.
- Paper that changes its quality at high temperature.
- The paper that: uses ink that melts, burns, evaporates or emits harmful gas with the temperature (about 150 °C or 302 °F) of the fixing assembly.
 - Heat-sensitive paper.
 - Paper used for colour printing with a processed surface.
 - Paper with a special coating on its surface. (Coated paper for ink jet printers, etc.)

- Paper with adhesive on its surface.
- Paper that causes failure or damage to the printer
 - Carbon paper.
 - Paper with staples, clips, ribbons or tapes.
 - Paper that has been used once by the printer, copy machine or other laser printers (the back of that paper is also improper).
- Paper that is difficult for the toner to adhere to.
 - Paper with rough surfaces such as rough paper and Japanese paper.
 - Paper containing thick fibers.
 - Paper with special coating on its surface. (Coated paper for ink jet printers, etc.)

Transparency Film

The transparencies may sometimes stick together. We recommend that you fan the transparencies, while holding them by the edges, before loading them in the multi-purpose tray.



IMPORTANT

- Use only transparencies designed to this printer. If other types of transparency are used, it may cause a paper feed jams or a reduction in print quality.
- Be sure to load transparencies in landscape orientation.

Adhesive Labels

Be sure to load adhesive labels face down into the multi-purpose tray.



IMPORTANT

- Load adhesive labels only in the multi-purpose tray. If they are loaded in the paper cassette, it may cause irrecoverable paper jams or a printer malfunction.
- Never use such labels as follows. Paper jams that are hard to clear or a printer failure may occur if the paper does not meet the specifications.
 - Paper with partly detached label or partially printed paper.
 - The labels partly used and with part of some labels turned upside-down exposing the sticky surface.
 - The labels that are easy to peel from the base.
- Be sure to load adhesive labels one sheet at a time in landscape orientation.
- Take out each sheet of the printed adhesive labels every time it has been discharged.

Envelopes

Close the flap and press the envelope with hands to let the air out of it. Flatten it well and load it with face down to the paper feed tray. For details including setting procedure, See “Loading Envelopes,” on p.3-27.



IMPORTANT

- Never use the following types of envelope. Paper jams which are hard to recover and printer failure may occur when paper type out of specification is used.

- Envelopes with fasteners or snaps.
- Envelopes with a window cut.
- Envelopes with wrinkles or creases.
- Envelopes with very irregular thickness at the folds or overlaps.
- Envelopes with irregular shape other than rectangle.
- Do not print on the back of envelopes.
- Be sure to load envelopes in landscape orientation.

Storing Paper

Handling and storing paper properly will ensure high print quality and prevent potential paper jams. Using paper that is crumpled or exposed to moisture or direct sunlight during improper storage or handling can contribute to poor print quality and paper jams. Follow these guidelines when you store and handle paper.



IMPORTANT

- Choose an appropriate location for storage.
For best performance, keep the ambient storage and work area temperature at 20 °C (±3%) or 68 °F (±5%). Keep the relative humidity at 45% (±5%).
- Guard against moisture.
Paper quality degrades in a moist environment. Store all unused paper in its wrapper. Never store paper on the floor where water and moisture can collect. In areas of high humidity you may need to store paper in a specially designed storage box.
- Avoid direct sunlight.
Exposure to direct sunlight can dramatically degrade paper quality. Store paper away from sunlight and keep unused paper in its wrapper.
- Avoid sudden changes in temperature or humidity.
If paper is moved between locations that differ widely in temperature or humidity, it may curl. If this situation cannot be avoided, store the paper in the work area by the printer for at least one day to give the paper time to adjust to the new conditions.
- Avoid physical damage to stored paper.
Store paper on a flat surface to avoid creasing or curling. Never store paper on its end or lean it against something.

Handling Paper



IMPORTANT

- Check the paper and ensure it is not torn, folded or otherwise damaged.
- Leave unused paper in its wrapper.
- Never mix different types of paper when you load the cassette or Multi-Purpose tray.
- Always wait until the cassette or tray is empty before loading fresh paper. This will help avoid paper jams.
- If paper in the output tray is excessively curled, turn over the paper stack in the cassette or tray.

Selecting Paper Feeding

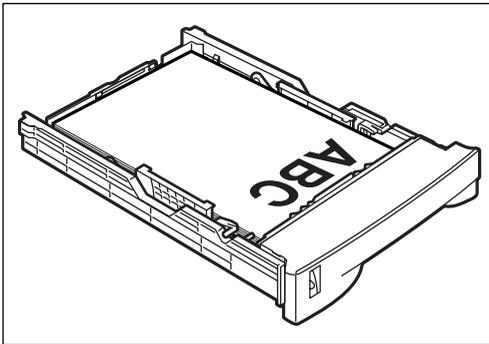
This section describes how to select the paper source for print jobs.

Paper Orientation

When using pre-printed paper (letterhead etc.), be sure to load the paper in the correct way as explained below:

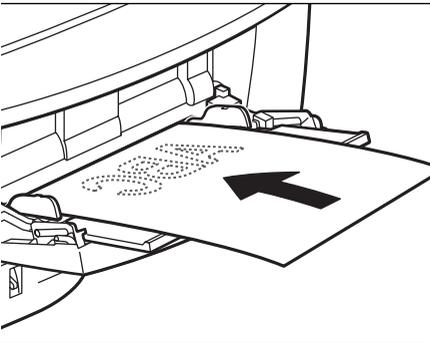
■ Paper Cassette

The printed side should be face up with the top of the paper at the front.



■ Multi-Purpose Tray

The printed side should be face down and placed as shown below.

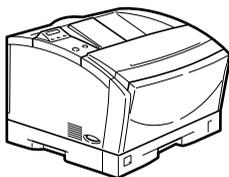


For details on paper feeding, See “Loading Paper in the Paper Cassette,” on p.3-12 or See “Loading Paper in the Multi-Purpose Tray,” on p.3-18.

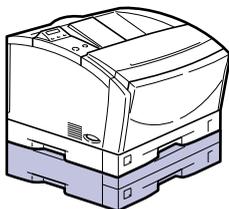
Paper Feeding Method

This printer has a multi-purpose tray in front of it, paper cassettes beneath it as the standard equipment. The printer can automatically feed up to about 350 sheets (80 g/m² or 21 lb.) total. In addition, up to three of 250-sheet paper feed units can be installed under the printer, so that it can automatically feed up to about 1,100 sheets (80 g/m² or 21 lb.).

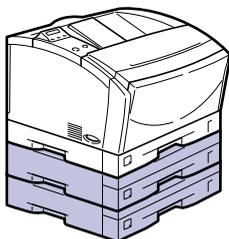
■ Ordinary type



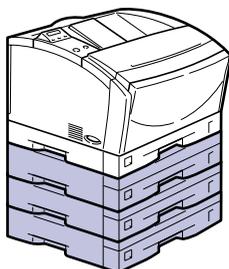
■ With one 250-sheet paper feed unit attached



■ With two 250-sheet paper feed units attached



■ With three 250-sheet paper feed units attached



 NOTE

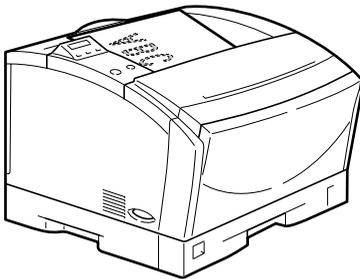
- You cannot install more than three 250-sheet paper feed units.
- Use only Canon Paper Feed Unit PF-65 units with this printer. You cannot use paper feed units designed for other printers.

Paper Delivery Method

This printer delivers the printed pages as described below.

Face-down Tray

The printed pages are delivered with the printed surface facing downwards (face down) to the face-down tray, which is located at the top of the printer. Each sheet of printed paper is stacked in the order the pages were printed.



 NOTE

- Remove each sheet after it has been printed when printing on adhesive labels.

Printing from the Paper Cassette

The paper cassette compartment can hold a universal paper cassette. The cassette can hold about 250 sheets of A3, Ledger (11x17), Letter, Legal, B5-JIS, Executive, A5, or A4 size paper of 64-90 g/m² (17-24 lbs.) in weight.

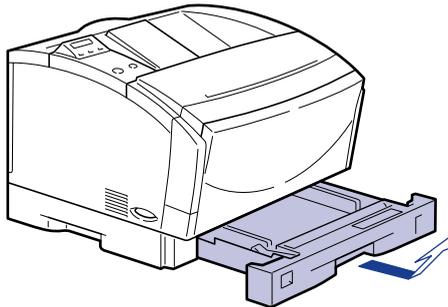
The paper should be set as shown below.

IMPORTANT

- To ensure optimum print quality and avoid paper jams, note the following items.
 - Always adjust the side and rear paper guides to match the size of paper you want to load into the cassette.
 - Never remove the paper cassette while the printer is printing.
 - Only use paper that is within the recommended range of paper weights.
 - Never use wrinkled or curled paper into the cassette.
 - The 250 Sheet Universal Cassette can hold about 250 sheets of paper with a weight of 80 g/m² or 21 lbs.
 - Never stack paper in the cassette higher than the limit guide located inside the cassette.
 - For details about what kind of paper can be used, see “Printable Paper,” on p.3-2.
- The paper volume status bar on the right of the cassette allows you to find out at a glance how much paper remains without having to remove the cassette.

Loading Paper in the Paper Cassette

- 1** Pull out the paper cassette until it stops. Remove it from the printer body by lifting the front of the cassette slightly.



IMPORTANT

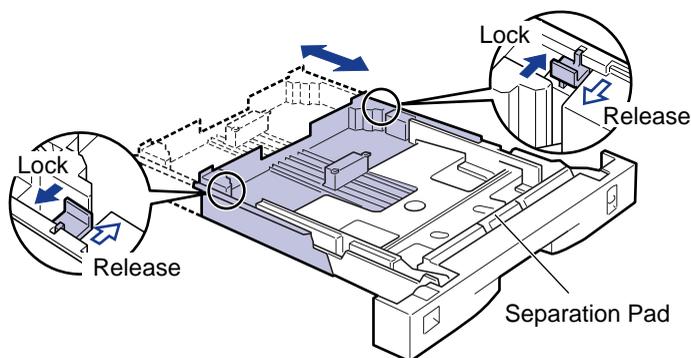
- The paper cassette cannot be pulled straight out of the printer. If you use force to pull it out horizontally, the printer or cassette may be damaged.
- When loading 250 sheets into the paper cassette, load the paper in two evenly sized stacks.
- Do not load transparencies in the paper cassette. For transparencies, use the multi-purpose tray. (See “Printing Transparencies,” on p.3-31)

2 Adjust the cassette extension according to the paper size to be loaded.

The lock release lever releases the cassette by pushing it inward and locks the cassette by pushing it outward.

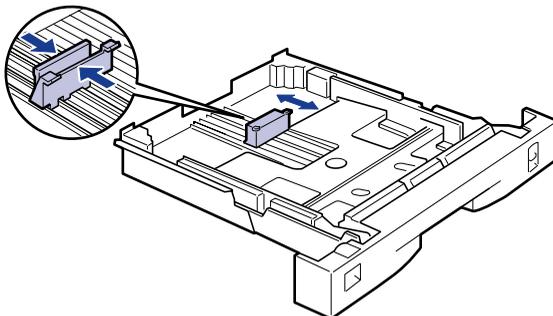
Shorten the extension cassette for landscape orientation.

Extend the extension cassette for portrait orientation.

**IMPORTANT**

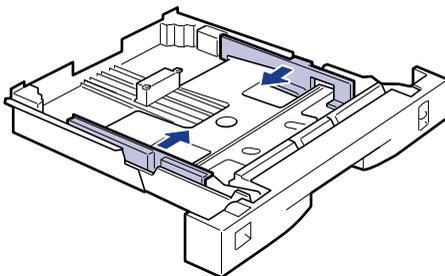
- Gently press the lock release levers using the inside of your fingers without applying pressure.
- Never touch the separating pad located at the front side of the cassette. It may lead to problems when feeding paper into the printer.

- 3** Determine the paper size you want to load. Then press and hold the tab on the rear guide. Slide it so that it aligns with the selected paper size. The guide should click into place.

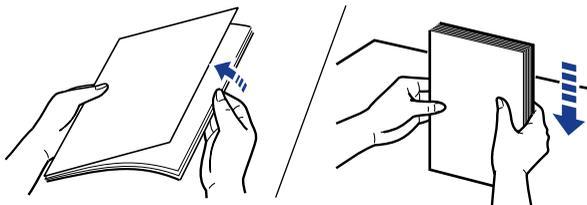


- 4** Slide the side guides so that they align with the selected paper size.

The paper guides on both sides move together.



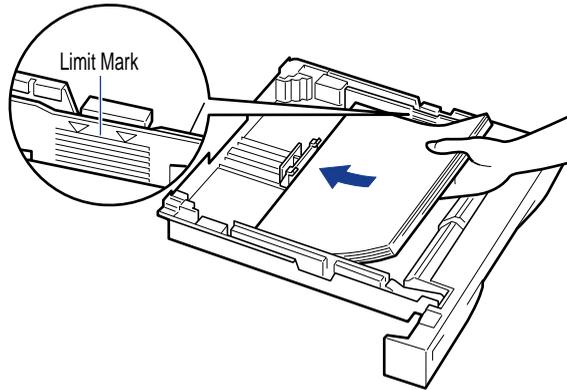
- 5** Tap the stack of paper on a flat surface to properly align the edges.



 **IMPORTANT**

- Fan the stack of paper well. If not, it may cause misfeeds or paper jams.

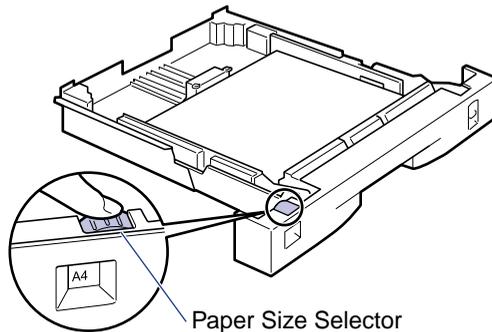
- 6** Load the stack of paper so that it rests snugly against the rear guide, and side guides.



IMPORTANT

- Make sure the paper stack is not above the limit guides as shown in the illustration.

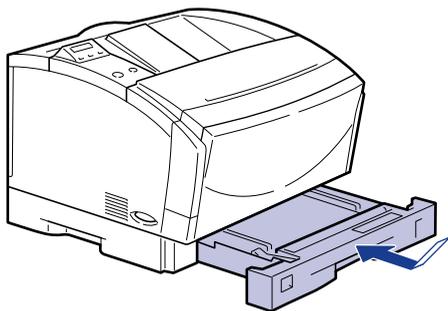
- 7** Adjust the paper size selector according to the size of the paper loaded.



IMPORTANT

- Make sure that the paper size indicated by the selector is the same as the paper size loaded before inserting the cassette into the printer. Errors may occur if the paper size is incorrect.

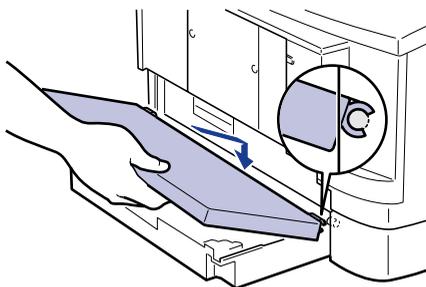
- 8** Insert the paper cassette at a slight angle, as shown in the figure to insert it to the printer body.



IMPORTANT

- Do not let the paper cassette touch the floor, or other surfaces. If the paper cassette touches other surfaces, the position of the paper volume status bar may be moved.
- The paper volume status bar shows how much paper remains.
- During printing, do not open or close the paper cassette, while the paper is being fed, etc. The vibration caused by doing so, especially when loaded to full capacity, will cause the image to move and adversely affect the quality of the printout.

- 9** When the cassette extension is extended, mount the cassette protecting cover on the back of the cassette.



IMPORTANT

- Do not put hands, push strongly or place objects on the cassette protecting cover. Otherwise, the cover may be damaged.

Printing from the Multi-Purpose Tray

The multi-purpose tray can hold a variety of print media: plain paper, envelopes, labels, transparencies and non-standard size paper. The capacity is approximately 100 sheets of cut-sheet paper (80 g/m² or 21 lbs.). When not in use, the tray can fold up into the printer.

Guidelines for Using the Multi-Purpose Tray

Print quality and printer life are greatly affected by what and how the print media is used. Please read “Printable Paper,” on p.3-2 to ensure the correct print media is used.

Use of print media not meeting the paper requirements may cause severe paper jams or result in excessive mechanical wear of the printer.



IMPORTANT

- Do not use the following paper in the tray:
 - Moist paper
 - Paper that is wavy, curled or damaged
 - Folded, clipped or stapled paper
 - Paper with cut-outs or perforations (not recommended)
 - Paper containing materials that melt, vaporize, offset, discolour or emit dangerous fumes at a temperature of 195°C (413°F) or higher
- Avoid pressing or applying excessive force on the tray as this may cause damage.
 - The paper stack must not exceed the limit guide.
 - Do not load different paper sizes on the tray at the same time.
 - Do not add paper to the tray if paper is already loaded; incorrect paper feed or a paper jam may occur. Only add paper when the tray is empty.
 - If printed pages come out of the printer all curled up, you can correct the problem by turning over the paper stack in the tray so that the bottom sheet in the stack is now at the top.
 - If the leading edge of the paper is curled, straighten it out as much as possible before loading it into the tray.
- Do not set the paper guides too tight so that the paper stack bends.
 - Do not set the paper guides too loose so that the paper stack is not evenly aligned.
 - Do not set the paper guides too loose so as to leave room between the guides and the paper.
 - Do not place the paper into the tray at an angle.
 - Do not set the paper so that the trailing edge is at an angle.

Loading Paper in the Multi-Purpose Tray

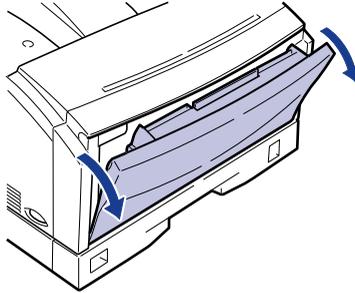
Loading Paper (other than envelopes)

To load plain paper, thick paper, labels, or transparencies in the multi-purpose tray, follow the steps of procedure described below.

IMPORTANT

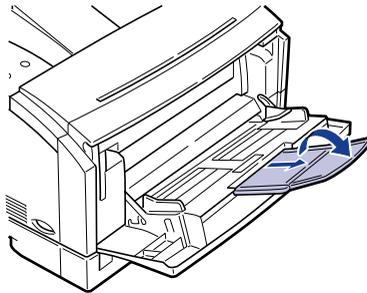
- Data cannot be printed in the 5mm wide border of the paper.
- Be sure to set transparencies and labels in landscape orientation.
- Use only transparencies dedicated to this printer. If other types of transparencies are used, it may cause a paper feed failure or deterioration in print quality.

- 1** Grasp the tabs on either side of the multi-purpose tray and gently pull it open.



IMPORTANT

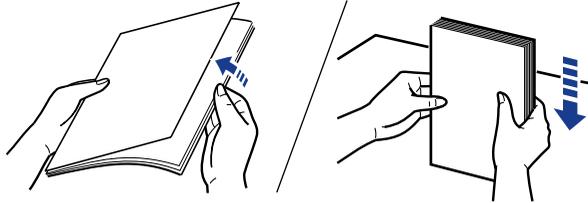
- Support the tray with both hands when opening it.
- When loading paper larger than B4, open the extension tray.



- To avoid damaging the multi-purpose tray and extension tray, do not place anything other than paper on them. In addition, avoid pressing or applying excessive force on the tray as this may damage it.

- To avoid damaging the multi-purpose tray, do not close the multi-purpose tray with the extension tray left opened.

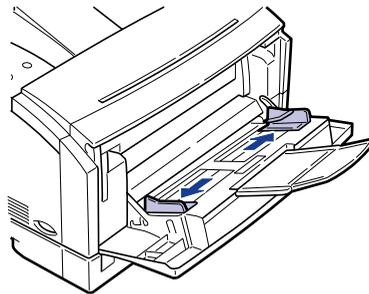
2 Fan a stack of paper, then tap the stack of paper on a flat surface to properly align the edges.



IMPORTANT

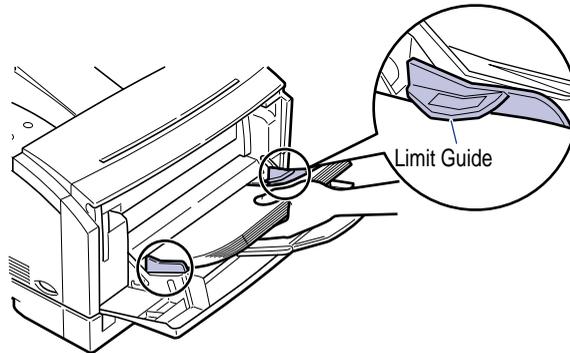
- When fanning or aligning transparencies, always hold the edges, where possible, to avoid touching the print side.
- Be sure to load a stack of transparencies after thoroughly fanning them. If not, they can be fed with overlapped causing paper jams.
- Take care not to mark/stain the print side of transparencies with fingerprints/dust or oil. They may cause poor printing.
- If the leading edge of the paper is bent or curled, straighten out the paper before loading it into the tray.

3 Set the paper guide width slightly larger than the paper width.



4 Insert the paper stack as far as it will go into the printer, with the print side facing down and the top of the paper going into the printer first.

Press the paper stack so it is below the limit guide.



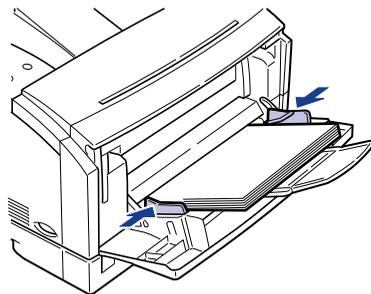
IMPORTANT

- Make sure that the leading edge of the paper is inserted all the way into the tray so that it is below the paper feed roller. The paper sensor for the tray is located underneath the paper feed roller. Please note the following points when loading small size paper in the tray. (If the paper is not loaded correctly, the paper will not be detected by the printer and a message will appear asking you to load paper in the tray.)
- Make sure that the paper guides are set correctly.
- Make sure that the paper is loaded correctly and that the leading edge is fully inserted into the printer.
- Always insert paper into the multi-purpose tray with the side you want to print on facing down. To avoid misfeeds and paper jams, paper should be inserted into the tray with the correct side as the leading edge.
- Do not load adhesive labels with plain paper. If you want to load adhesive labels when plain paper is loaded, remove all the plain paper, then load the adhesive labels.
- Check the right side of the adhesive labels. Load them face down into the multi-purpose tray one sheet at a time.
- Be sure to load adhesive labels in landscape orientation.

NOTE

- When the paper such as A4- or letter-sized paper is loaded in the landscape orientation, the left side of paper will be the top end of image as viewed from the front of the main unit.
- When the paper such as B4- or A3-sized paper is loaded in the portrait orientation, the far side of the paper will be the top end of image.

- 5** Slide the side guides so that they closely fit the right and left edges of the paper.



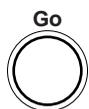
IMPORTANT

- Be sure to set the paper guides to the paper width. Misfeeds or paper jam may occur if the paper guides are too loose or too tight.

Loading paper in the multi-purpose tray is completed. Proceed to “Setting the Paper Size for the Multi-Purpose Tray,” on p.3-21.

Setting the Paper Size for the Multi-Purpose Tray

The printer does not have a paper size sensor for the multi-purpose tray. Please be sure to set the correct paper size from the control panel. If you do not set the correct paper size, misprints and paper jams will occur. The default paper size is A4-size paper.



- 1** Press [Go] to take the printer off-line.

The printer goes off-line and is ready for settings to be made from the control panel.



- 2** Press [Menu] until you see <FEEDER MENU> in the top line.

FEEDER MENU



- 3** Press [Item] until you see <MPT SIZE=> in the top line.

MPT SIZE=



- 4** Press [Value] until you see the size of the paper in the multi-purpose tray. Letter size is shown here, as an example.

MPT SIZE=

The current setting appears on the LCD display.

MPT SIZE=
LETTER

Enter/Cancel



- 5** Press [Enter].

B5

A "*" appears to the right of the paper size. This indicates the selected paper size for the multi-purpose tray.

B5 *



- 6** Press [Go] to turn on the On Line indicator.

The printer comes on-line and is ready for printing.

To print from the printer driver, specify the paper type in the printer driver. (See the *PCL Driver Guide*.)

Printing the First Sheet on Letterhead

Follow this procedure to print the first page on letterhead paper and the remainder on paper from the standard paper cassette.



- 1** Press [Go] to take the printer off-line.

At this time, make sure the On Line indicator is off. The <READY> message will be changed to <PAUSED>.



- 2** Press [Menu] until you see <FEEDER MENU> in the top line.



- 3** Press [Item].

The following message will appear in the bottom line.

FEED=CASSETTE

A different message <CASSETTE2> may appear if an optional Canon Paper Feed Unit PF-65 is installed.

-  **4** Press [Value] until you see <MPT>.
-  **5** Press [Enter].
-  **6** Press [Item] until you see <TRAY SWITCH> to make sure it is on. If it is not, press Value until you see ON and press [Enter].
-  **7** Press [Item] until you see <MPT SIZE=> in the top line.
For manual feed, you have to set the paper size for the tray because the tray has no paper size sensor.
-  **8** Press [Value] until you see the paper size you want. Then press [Enter].
-  **9** Press [Go] to bring the printer back on-line.
- 10** Open the tray and load one sheet of letterhead with the print side face-down and the top of the page inserted into the printer.
- 11** Start to print with the software application.
- 12** The printer will take the first sheet from the tray and will automatically feed remaining sheets from the standard paper cassette.
- 13** Close the multi-purpose tray.

If you frequently print letters on letterhead paper, you may want to leave the printer in this setting. The printer will always check the multi-purpose tray first. If no paper is loaded, the printer will then select the standard paper cassette.

Using the Multi-Purpose Tray as a Manual Feed Station

Follow this procedure to use the tray as a manual feed station. In this setting, you will have to feed one sheet at a time. Use manual feed for media that should be printed one sheet at a time, such as overhead transparencies, which tend to stick together when stacked.

Turning on Manual Feed



1 Press [Go] to take the printer off-line.

At this time, make sure the On Line indicator is off. The <READY> message will be changed to <PAUSED>.



2 Press [Menu] until you see <FEEDER MENU> in the top line.



3 Press [Item] until you see <MANUAL> in the bottom line.



4 Press [Value] to change the setting to ON.



5 Press [Enter].

For manual feed, you have to set the paper size for the tray because the tray has no paper size sensor.



6 Press [Item] until you see <MPT SIZE=> in the top line.



7 Press [Value] until you see the paper size you want to select. Then press [Enter].



8 Press [Go] to bring the printer back on-line.

Printing Envelopes from the Multi-Purpose Tray

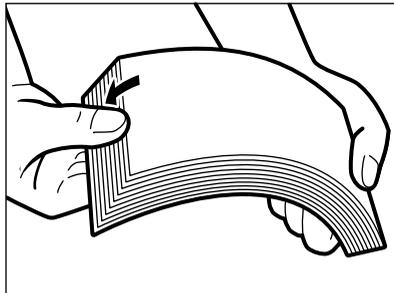
Before Loading Envelopes

Before you load envelopes in the multi-purpose tray, observe the following precautions.

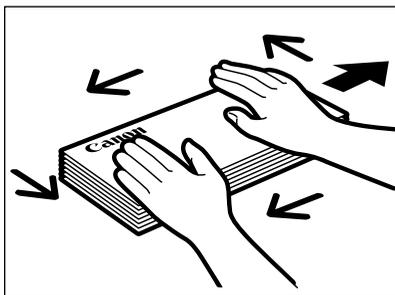
IMPORTANT

- To avoid serious damage to the printer:
 - Never use envelopes with metal or plastic fasteners or snaps.
 - Never use envelopes that are torn, curled, wrinkled or damaged in any way.
 - Do not use envelopes with peel-off strips.
 - Do not use envelopes with any type of treated surface or lettering that might melt, discolour or degrade at a high temperature of 195°C (413°F).
 - To avoid paper jams, use only envelopes of the same size and follow the simple procedure described below before loading a stack of envelopes into the tray.

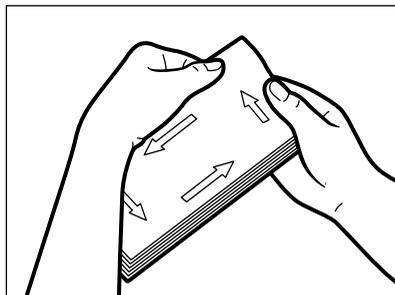
- 1** Fan the stack of envelopes to make sure none of the envelopes are stuck together.



- 2** Place the envelopes on a clean, flat surface and press down the corners to flatten the envelopes.



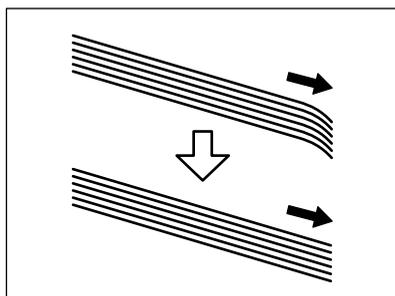
- 3** Flex the stack on all four sides to remove any stiffness. Check all corners. If the corners are curled, straighten them.



IMPORTANT

- Be sure to flatten out the leading edges of the envelopes if they are curled downwards. Otherwise a paper jam may occur.

- 4** Correct any dog-eared corners, then align the edges of the stack of envelopes by tapping them on a flat surface.

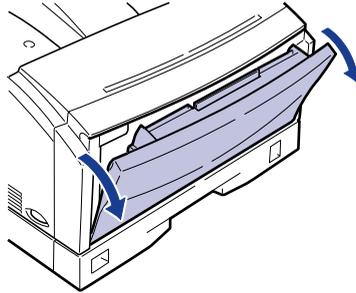


Loading Envelopes

The multi-purpose tray can hold Monarch, COM 10, C5, and DL envelopes. To load envelopes in the multi-purpose tray, follow the steps below.

1 Grasp the tabs on either side of the multi-purpose tray and gently pull it open.

Open the extension tray where necessary.

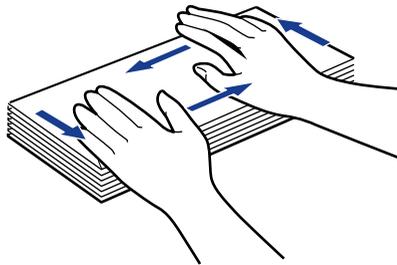


IMPORTANT

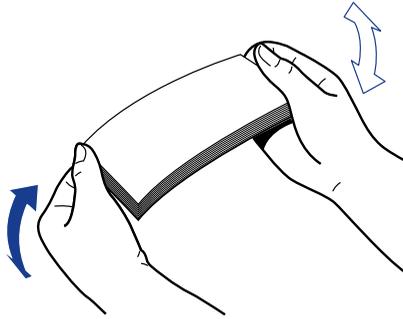
- Support the multi-purpose tray with both hands when opening it.

2 Close the envelope flap and put the envelopes on a flat surface. Press down the corners to crease and flatten the envelopes.

Align the edges of the stack of envelopes on a flat surface.



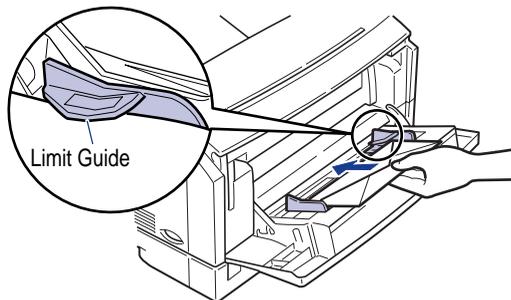
3 Fan the envelopes holding them at both edges.



4 Set the side guides width slightly larger than the envelope width.

5 Slide the stack of envelopes into the printer as far as it will go, with the print side facing down and the flap as the leading edge facing towards the printer. Adjust the paper guides to the width of the envelopes.

Press the envelope stack so that it is below the limit guide. The multi-purpose tray can hold about ten envelopes.



IMPORTANT

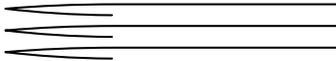
- The stack of envelopes must not exceed the paper limit guides.
- Printing is only possible on the address side of the envelopes, so you must load the envelopes with the flap on top and as the leading edge.
- Make sure that the paper guides are set to the size of the envelopes. Paper jams or misfeeds may occur if they are too loose or too tight.
- Make sure that the envelopes are not placed at an angle.
- You must use landscape orientation when printing on envelopes.
- Do not open the extension tray when loading envelopes in the multi-purpose tray.

 **NOTE**

- After you have loaded the envelopes in the multi-purpose tray, but before they start printing, please check the following items to avoid paper jams or misfeeds.
 - Is the stack of envelopes bending? The stack may bend if the paper guides are too tight.
 - Are the envelopes evenly stacked? If the paper guides are loose, the envelopes may not stack evenly.
 - Is the stack straight? Do not place the stack of envelopes at an angle.
 - Are the flaps of each of the envelopes separate? If the flaps of the envelopes overlap, paper jams or misfeeds will occur.
- The illustrations below show the acceptable and unacceptable arrangement of the flaps for the envelopes in the stack.

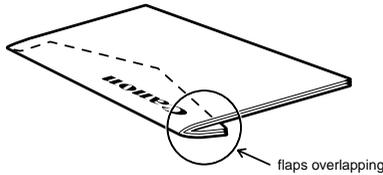
Acceptable

The flap of each envelope should be separate, not overlapping the edges of any of the other envelopes in the stack.

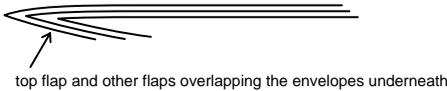


Unacceptable

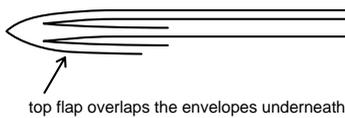
If the flap of any of the envelopes overlap the edges of any of the other envelopes in the stack, like those in the example below, paper jams or misfeeds will occur.



Examples of unacceptable overlapping flaps



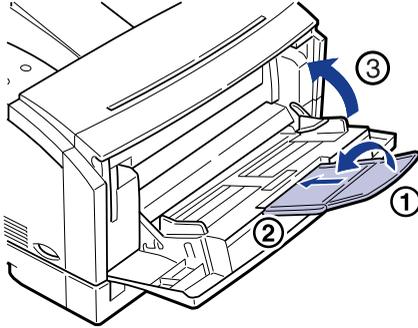
or



Cautions on Closing the Multi-Purpose Tray

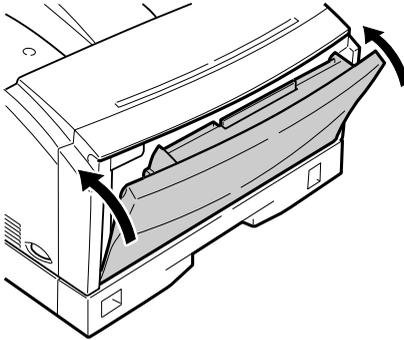
IMPORTANT

- To prevent damage to the top cover avoid slamming it shut.
- Closing the multi-purpose tray:
 1. Close the flap of extension tray.
 2. Then slide the extension tray back into its original position.
 3. Gently close the multi-purpose tray.



NOTE

- If the multi-purpose tray does not close easily, do not try to force it shut.
 1. Press down lightly at the center of the tray as shown in the illustration.
 2. Gently close the multi-purpose tray.



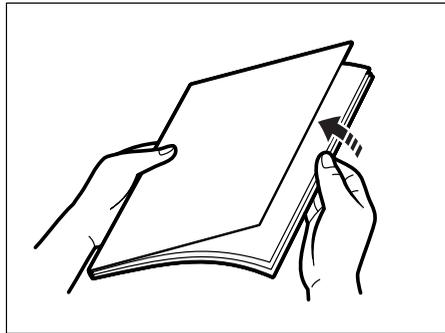
Printing Transparencies

Transparencies can only be loaded in the multi-purpose tray. About 50 sheets can be loaded at a time.

For optimum printing results, we recommend using Canon transparencies. For details contact your local supplier.

Follow these steps to load transparencies:

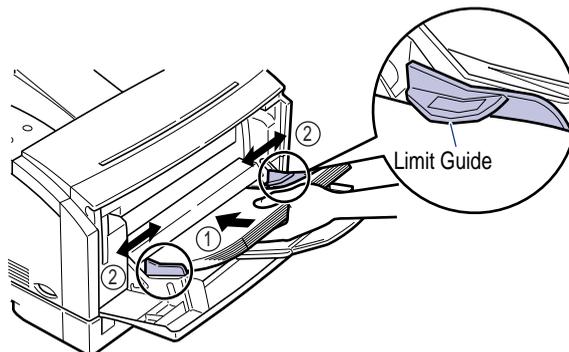
- 1** Before loading, fan a stack of transparencies, then tap them on a flat surface to align the edges.



NOTE

- When handling transparencies, always hold the edges to avoid touching the print area.

- 2** Slide the transparencies into the printer as far as they will go ①, with the print side facing down. Adjust the limit guides to the width of the stack of transparencies ②.





IMPORTANT

- The transparencies must not exceed the paper limit guide.
- Take care not to scratch or mark the print area of the transparencies with fingerprints.



NOTE

- Remove each transparency as soon as it is delivered to the face-down tray. This will prevent curling and paper jams.

The Printing Environment

4

CHAPTER

This chapter describes the keys on the control panel and how to use them to adjust the printer settings to your own particular requirements.

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Quick Tour of the Printing Environment	4-3
How the Menus Are Organized	4-3
Going Off-line for Menu Display and Item Selection	4-4
Making a Selection from a Menu	4-4

What is the Printing Environment?

Before using the control panel of the printer you should familiarize yourself with the keys on the control panel and how they can be used to adjust the various settings of the printer. After you install the printer driver, you can control most routine printing tasks from your application software. Software application settings override most of the control panel settings.

About the Printing Environment

4

The Printing Environment

The printing environment is a collection of settings that determine how the printer operates. These settings affect what kind of data the printer can process and how it prints on a page. All these settings are already stored in the printer to ensure optimum operation of your printer. Every time you turn the printer on, a range of settings called defaults stored in the printer's memory are enabled. Default settings are configured at the factory before shipping. When you unpack the printer and set it up, it is ready for operation using the factory defaults. You can change these factory defaults to suit your own needs so they are enabled every time you turn the printer on.

How you use the printer depends on how many built-in features and options you intend to set up and use. If you are the only person using the printer, then your printing environment is less complicated than someone who is connected to a shared network with the printer set up for personality switching. Even if you have no interest in adjusting the factory default settings or if they have already been done for you, read through this chapter at least once to familiarize yourself with some of the printer's most important features.

Quick Tour of the Printing Environment

This is a brief introduction to the printer control panel buttons you can use to open menus and view their contents or change their settings.

Take a few minutes to actually use the printer control panel buttons as you read through this section.

How the Menus Are Organized

To understand how the menus, setting items, and values are organized, refer to the last pages of this manual, where you can see the Menu Operation Flow.

■ Quick Summary: Using the menu buttons

Button	What it does
Go	Press [Go] to take the printer off-line so you can see the menus and settings. The printer must be off-line before you can use the menus. When you have finished with the menus, press [Go] to bring the printer back on-line.
Menu	Press [Menu] to open the menu display and display the next menu title. Press [Menu] repeatedly to scroll through the menu titles until you see the menu you want to use. Press [Shift] and [Menu] repeatedly to scroll through the menu titles in reverse order.
Item	With the title of the menu you want to open on the LCD display, press [Item] to display the first item in the menu. Press [Item] repeatedly to scroll through all the item names. Press [Shift] and [Item] repeatedly to scroll through the item names in reverse order.
Value	With the name of the item you want to change on the LCD display, press [Value] to display the first setting value. Press [Value] repeatedly to scroll through all the values. Press [Shift] and [Value] to scroll through the values in reverse order.
Enter	With the value you want to select on the LCD display, press [Enter]. After you press [Enter], a small asterisk (*) appears next to the value. This indicates that the displayed value is the current setting.
Cancel	Press [Shift] and [Enter/Cancel] to cancel the current operation.



IMPORTANT

- If you do not press any button for more than five minutes, the printer closes the menus, returns to the initial on-line condition and displays the <READY> message. However, the printer does not automatically come back on-line when there is a printer error (the Alarm indicator is lit or a warning message code is blinking on the LCD display), or when a menu function or the paper size is being set.

Going Off-line for Menu Display and Item Selection

Press [Go] to switch the On Line indicator on and off. When the On Line indicator is on, the printer is on-line and ready to print. The printer must be on-line to receive data from the host computer.

Every time you start a print job, check the On Line indicator to ensure it is on. If you press other buttons on the printer control panel while the printer is on-line, the printer will beep to warn you that these buttons are presently disabled.

When the On Line indicator is off, the printer is off-line. The printer must be off-line before you can use the [Menu], [Item], and [Value] buttons.

Making a Selection from a Menu

Follow this example procedure to familiarize yourself with how to use the printer control panel buttons to view or change menu settings. The example below shows you how to view or change the density setting.

1 Check the control panel to ensure that the Job indicator is off.



2 Press [Go] to take the printer off-line.

The On Line indicator goes off and <PAUSED> is displayed in the top line.



3 Press [Menu] until you see CONFIG MENU in the top line.

CONFIG MENU



4 Press [Item] to open the CONFIG MENU and display the first item in the menu.

<JAM RECOVERY=OFF> is displayed in the bottom line of the LCD display.

Item


5 Press [Item] until you see <DENSITY> in the bottom line.

Value


6 Press [Value] to scroll through the values for the DENSITY setting.

Value


7 If you want to change the setting, press [Value] until the values you want is displayed. Then press [Enter].

To use a darker setting, select a higher number. A darker setting will use more toner.

To use a lighter setting, select a lower number. A lighter setting will use less toner.

If you want to exit or return to the item level of the menu without making any changes, press [Item].

If you want to exit or return to the menu level without making any changes, press [Menu].

If you want to bring the printer back on-line without making any changes, press [Go].

Using the Menu Operation Flow at the back of this manual as a reference, take a few minutes to look at some of the other menus, items, and values.



NOTE

- Some menus and items will not be displayed until the corresponding optional equipment has been installed. For example, you will not see the PS MENU or any of the PostScript items unless the optional Adobe PostScript module has been installed in the printer.
- When the printer is off-line, and <PAUSED> is displayed in the printer control panel, you can cancel a job by pressing [Enter] while holding down [Shift].

PostScript Printing

5

CHAPTER

This chapter describes the features available with the optional Canon Adobe PostScript 3 Module A-65, which includes the Adobe PostScript 3 software.

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Setting Up the PostScript Printing Environment.	5-4
Printing the PS Font List	5-4
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Testing the PostScript Installation

The Adobe PostScript 3 personality is available as an option for the printer. The descriptions in this section assume that you have already purchased and installed the optional Canon Adobe PostScript 3 Module A-65 for Adobe PostScript 3 printing.

For more information about how to install the Canon Adobe PostScript 3 Module A-65 on the printer, see the instructions in the *Setup Guide*.

Checking the Menus

After installing the PostScript module, follow the procedure below to check that you can now display and select items from PS MENU.

5

PostScript Printing



1 Press [Go] to take the printer off-line.

The On Line indicator should go off. <PAUSED> will appear in the display.



2 Press [Menu] to display each of the menus listed below to check their settings.

- The PS MENU is now enabled and ready to use.
- The PERSONALITY item under the PARALLEL MENU, USB MENU and the ETHERNET MENU is now ready to use.
- Under the TEST MENU, you can now select and print the PS Font List.

Setting PostScript Printing Options

This section describes personality switching, setting up the PostScript environment, and the PostScript menu.

Automatic Personality Switching

After successful installation of the PostScript module, the printer is set by factory default for automatic personality switching on all the active ports. This means the printer automatically selects the correct personality for the print job based on the type of data it receives from the host computer. If you leave the printer set for automatic personality switching, the printer will select the PostScript personality for a print stream that contains PostScript data.

Dedicating the Printer to the PostScript Language

You can specify that the printer should only print PostScript print jobs. Follow the procedure below to dedicate your printer to the PostScript personality.



1 Press [Go] to take the printer off-line.

The On Line indicator should go off. <PAUSED> will appear in the display.



2 Press [Menu] until you see <PARALLEL MENU> (USB MENU, ETHERNET MENU) in the top line.



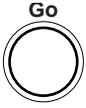
3 Press [Item] until you see <PERSONALITY=AUTO>.



4 Press [Value] until you see <PERSONALITY=PS> (PostScript).



5 To select PS, press [Enter].



6 Press [Go] to bring the printer back on-line.

The printer is now dedicated to the PostScript personality.

Setting Up the PostScript Printing Environment

After you have installed the optional PostScript module and tested the PostScript personality, you can use the enabled menus and menu items to set up your PostScript printing environment.

5

Printing the PS Font List

Before you try to print the font list, follow the procedure to dedicate the printer to the PostScript personality (See “Dedicating the Printer to the PostScript Language,” on p.5-3).

Follow the procedure below to print the PS Font List. Samples and a description of what each page contains are provided on the following pages.



1 Press [Go] to take the printer off-line.

The On Line indicator should go off. <PAUSED> will appear in the display.



2 Press [Menu] until you see <TEST MENU> in the top line.



3 Press [Item] until you see <PRINT PS FONTS> in the bottom line.



4 Press [Enter] to start printing the font list.

It may take a few minutes for the font list to print.

Notes on the PostScript Personality

After the Canon Adobe PostScript 3 Module A-65 is installed, the printer offers a variety of PostScript 3 features. However, before you start printing, note the following important points:

- When the PostScript personality is in use, pressing [Go] will not print data remaining in the printer when the On Line indicator is blinking.
- If the amount of printer memory is insufficient when you print PostScript data, you may experience some reduction in the quality of your printed images. To avoid reduction in the quality of printed images, ensure you have enough memory in the printer.
- Do not turn on the Level 1 Compatible option on the driver menu. This printer will not work properly on PostScript created with this option.
- Avoid using commands with paper size compatibility operators such as A4, Letter, etc. These operators are included for compatibility only with existing PostScript Level 1 printer drivers. If one of these operators is used, the printer will not respond according to the PageSize policy.
- To avoid problems with print results, do not use the OutputPage key command (page device parameter) together with a @PJL JOB (a PJL job command).

Summary of the Printer Menus

6

CHAPTER

This chapter provide a brief outline of the function of each of the printer menus, and an example of how to use them.

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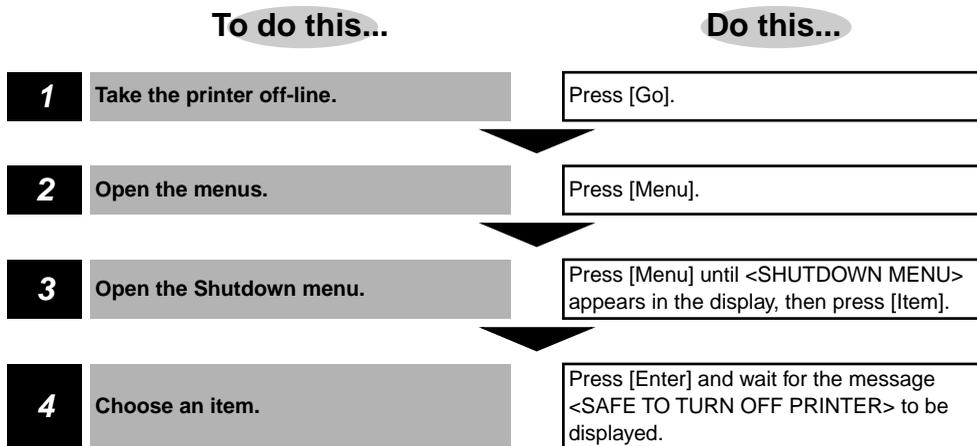
SHUTDOWN MENU

About SHUTDOWN MENU

This menu is used to shut down the printer. You should always use this menu to shut down the printer if the optional Canon Hard Disk HD-65 has been installed. See “SHUTDOWN MENU,” on p.7-8 for details.

Operation flow for SHUTDOWN MENU

Follow the procedure below to shut down the printer using the SHUTDOWN MENU.



Turn the printer off.

SECURED JOB MENU

About SECURED JOB MENU

This menu is used to print secured jobs that are stored on the printer. See “SECURED JOB MENU,” on p.7-9 for details of the various settings.



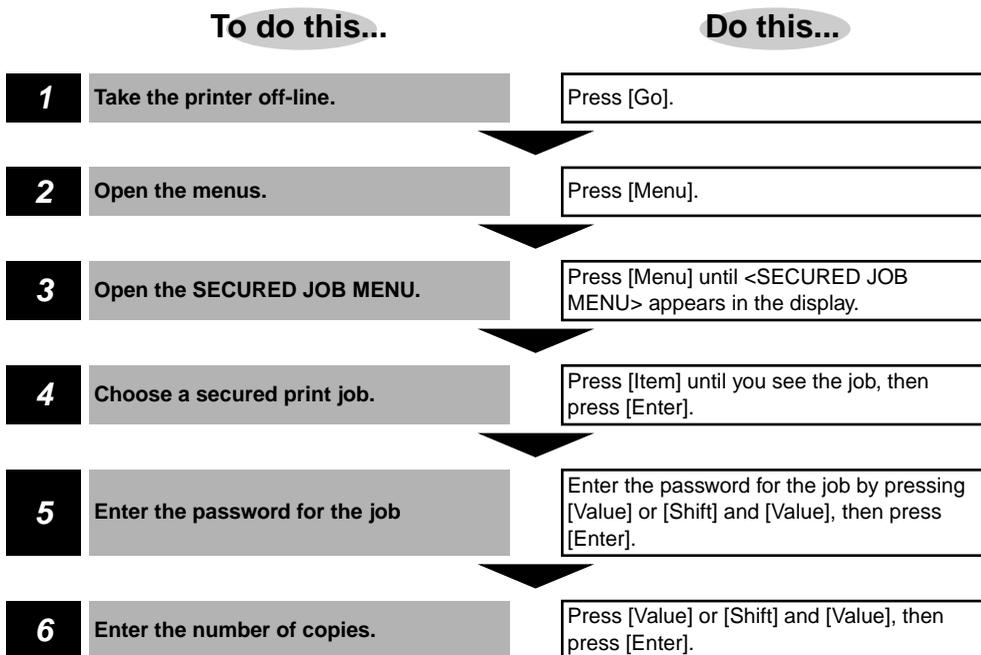
IMPORTANT

- This menu will only appear if there is a secured job stored on the printer. Otherwise, the TEST MENU will be the first menu displayed.

Operation flow for SECURED JOB MENU

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Summary of the Printer Menus



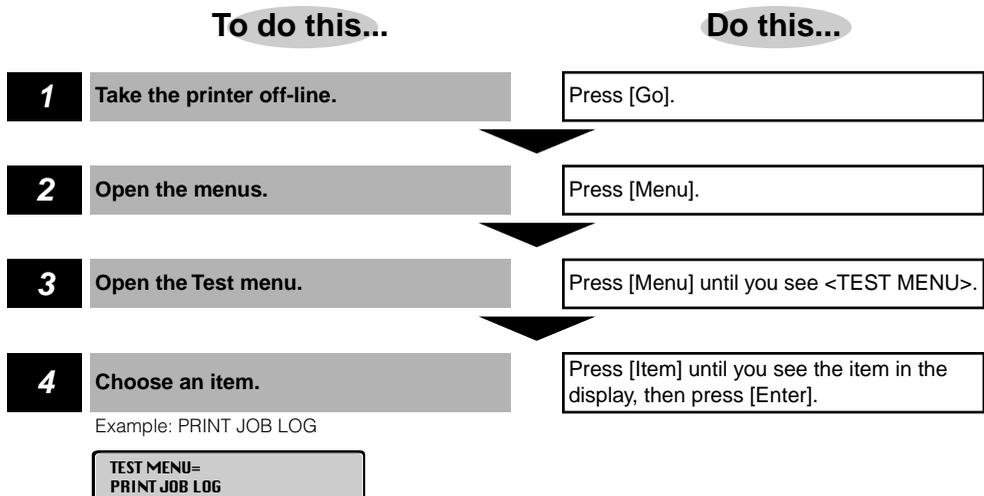
TEST MENU

About TEST MENU

This menu is used to print test prints and other configuration details for the printer. See “TEST MENU,” on p.7-10 for details of the various options available from this menu.

Operation flow for TEST MENU

Use the example procedure below to open the TEST MENU and specify the option you want to select.



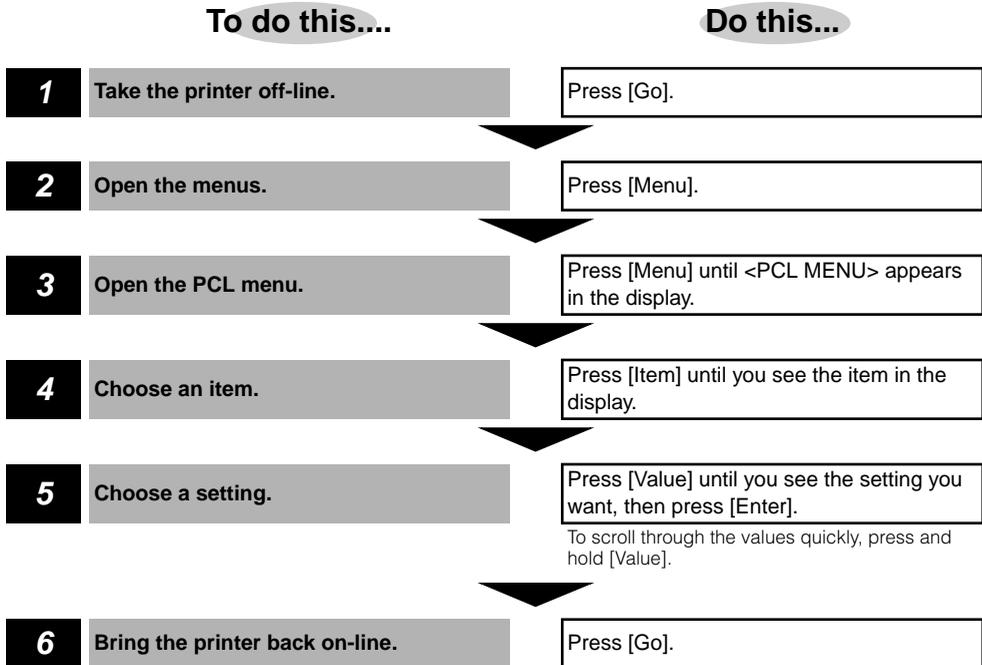
PCL MENU

About PCL MENU

This menu is used to specify various print options for PCL print jobs. See “PCL MENU,” on p.7-12 for details of the various settings.

Operation flow for PCL MENU

Use the example procedure below to open the PCL MENU and specify the option you want to select.



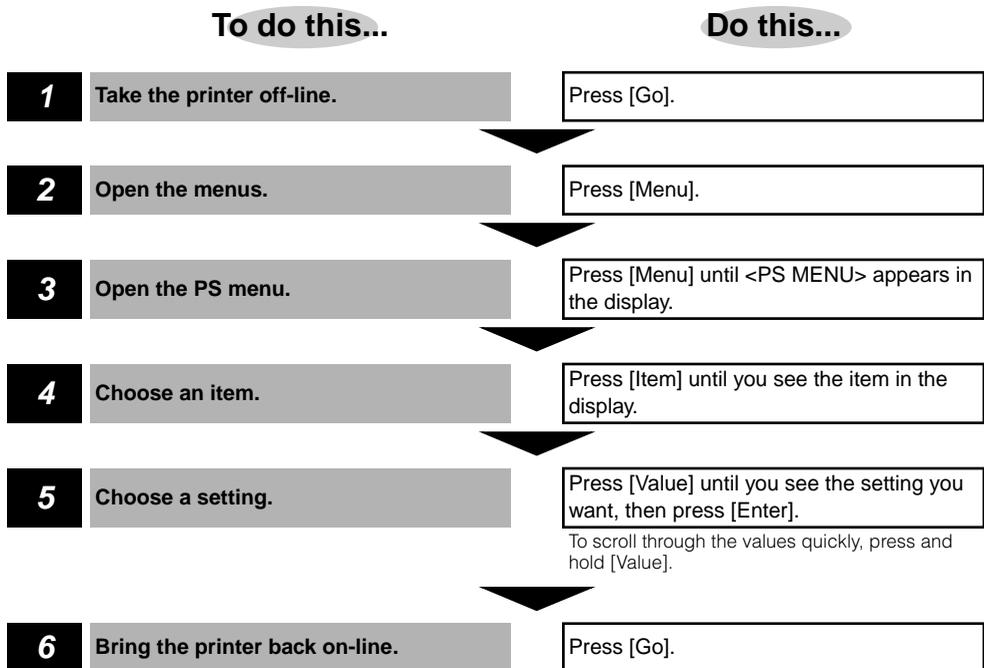
PS MENU

About PS MENU

This menu is used to specify various options for PostScript print jobs. This menu will only appear if the optional Canon Adobe PostScript 3 Module A-65 has been installed. See “PS MENU,” on p.7-17 for details of the various settings.

Operation flow for PS MENU

Use the example procedure below to open the PS MENU and specify the option you want to select.



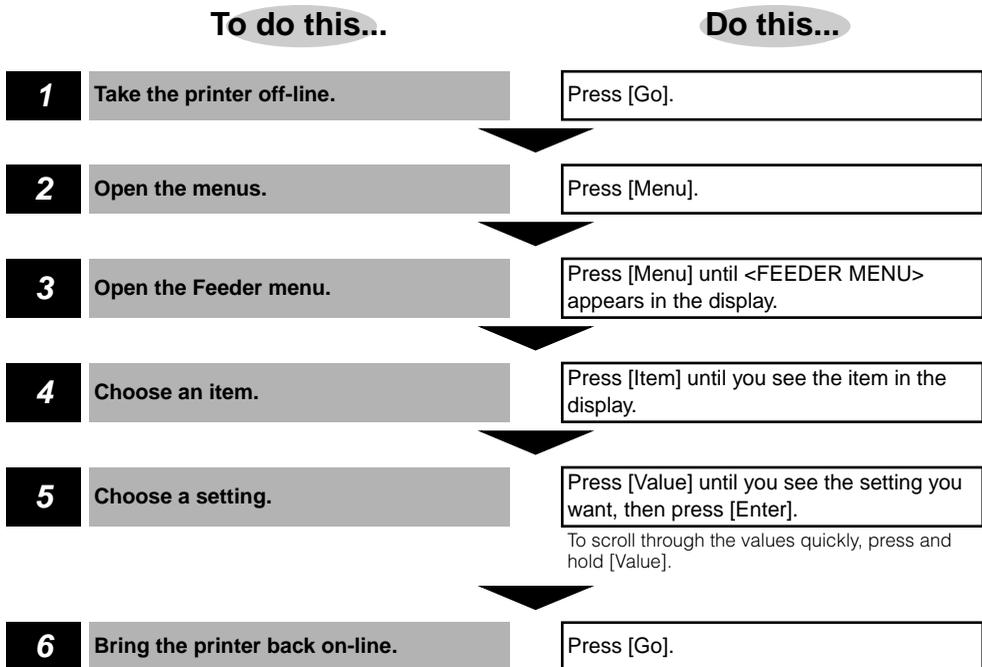
FEEDER MENU

About FEEDER MENU

This menu is used to specify the paper size loaded in each of the paper sources and to select other paper feed options. See “FEEDER MENU,” on p.7-19 for details of the various settings.

Operation flow for FEEDER MENU

Use the example procedure below to open the FEEDER MENU and specify the option you want to select.



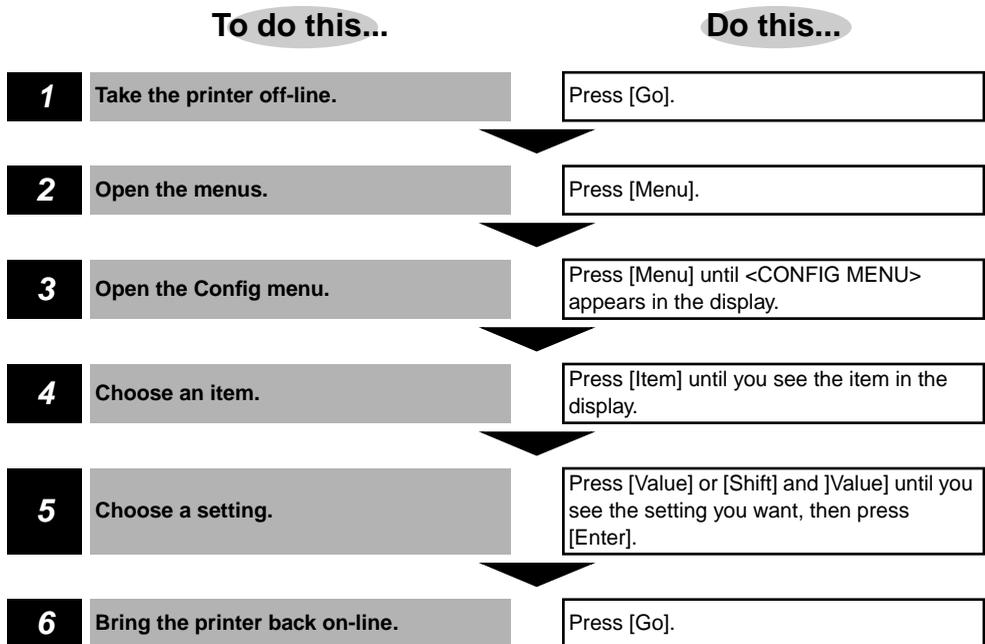
CONFIG MENU

About CONFIG MENU

This menu is used to specify various configuration options for printer, such as toner density and power saving options. See “CONFIG MENU,” on p.7-22 for details of the various settings.

Operation flow for CONFIG MENU

Use the example procedure below to open the CONFIG MENU and specify the option you want to select.



ENTER PASSWORD

About the ENTER PASSWORD Menu

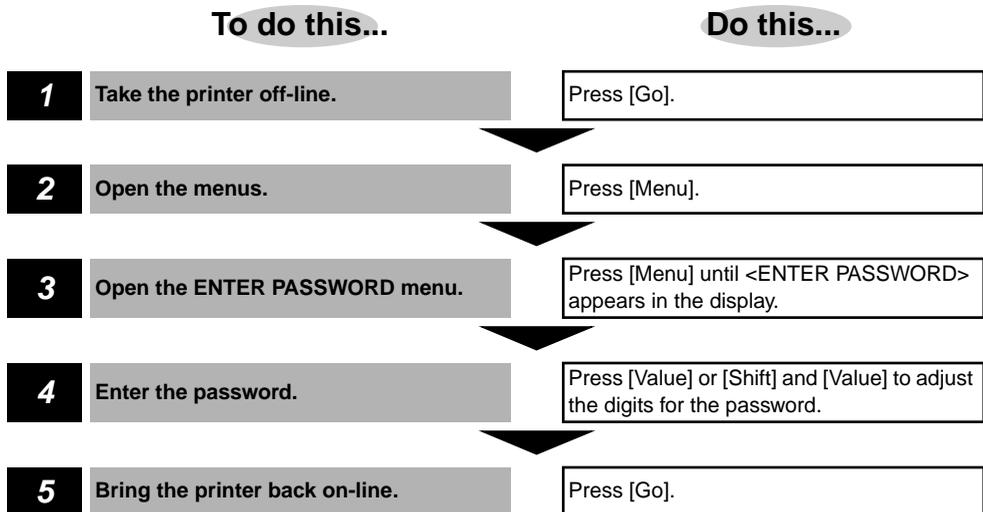
This menu is used to enter the password for the printer. If a password has been set for the printer, you must enter the password to access the advanced printing option menus. See “ENTER PASSWORD,” on p.7-26 for details.

Operation flow for the ENTER PASSWORD Menu

Use the procedure below to open the ENTER PASSWORD menu and enter the password for the printer.

6

Summary of the Printer Menus



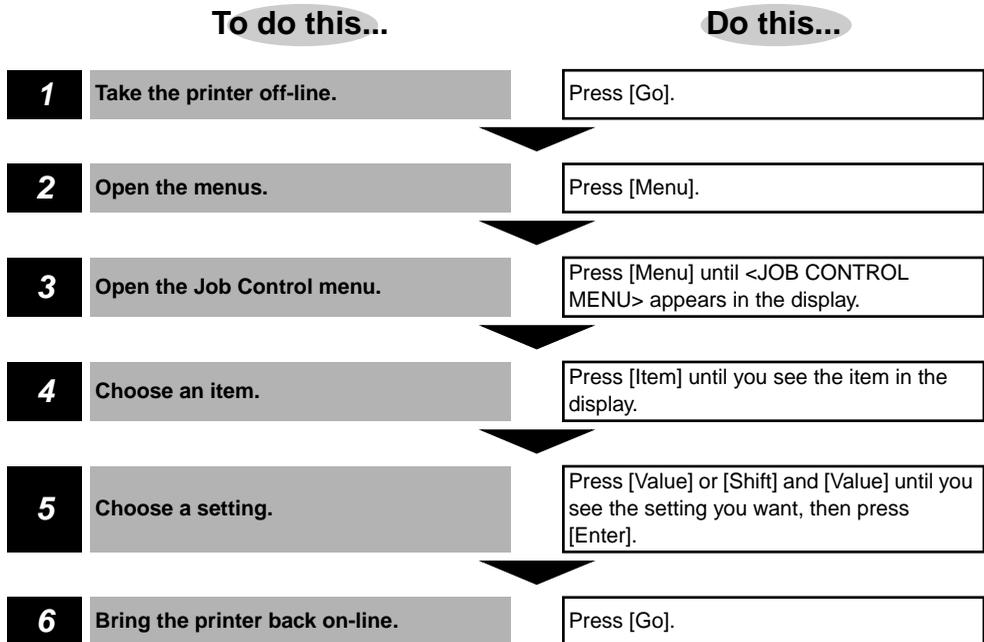
JOB CONTROL MENU

About JOB CONTROL MENU

This menu is used to specify options for handling jobs received by the printer. See “JOB CONTROL MENU,” on p.7-27 for details on the various settings.

Operation flow for JOB CONTROL MENU

Use the example procedure below to open the JOB CONTROL MENU and specify the option you want to select.



PARALLEL MENU

About PARALLEL MENU

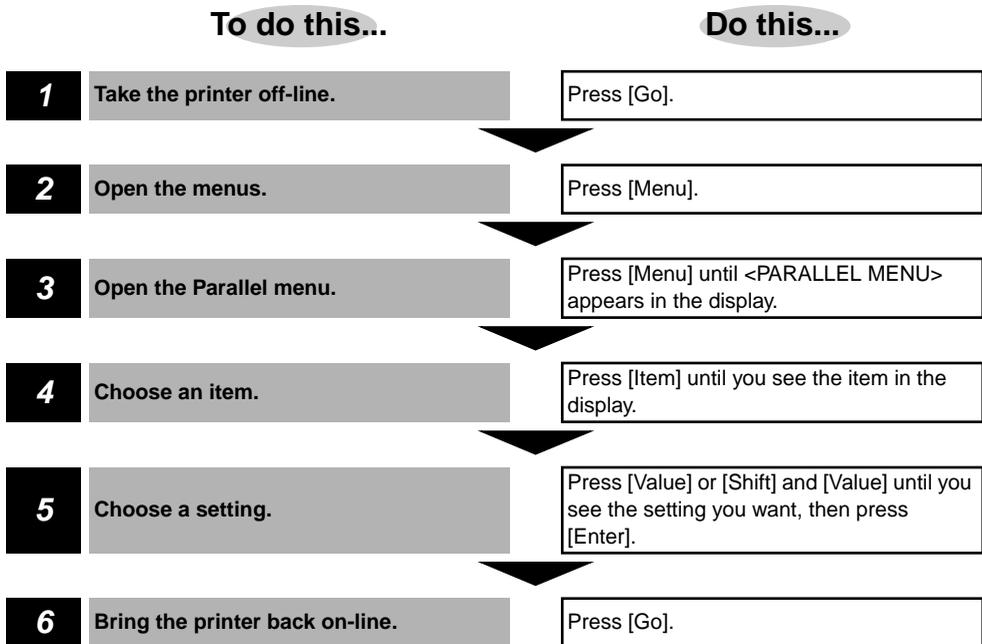
This menu is used to specify the default printer personality and interface settings for jobs received via the parallel interface port. See “PARALLEL MENU,” on p.7-28 for details of the various settings.

Operation flow for PARALLEL MENU

Use the example procedure below to open the PARALLEL MENU and specify the option you want to select.

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Summary of the Printer Menus



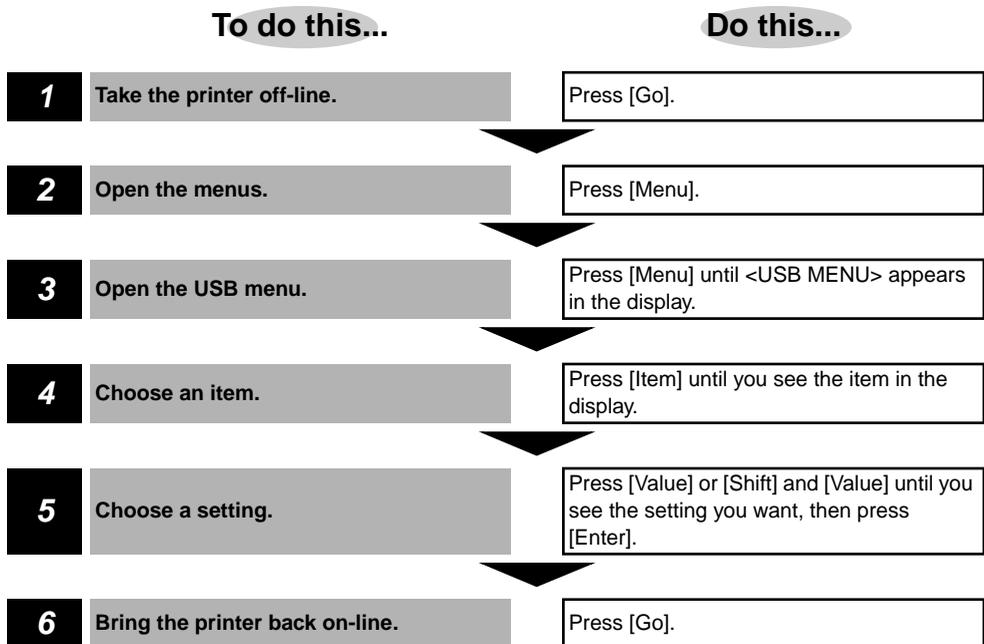
USB MENU

About USB MENU

This menu is used to specify the default printer personality and interface settings for jobs received via the USB port. See “USB MENU,” on p.7-30 for details of the various settings.

Operation flow for USB MENU

Use the example procedure below to open the USB MENU and specify the option you want to select.



ETHERNET MENU

About ETHERNET MENU

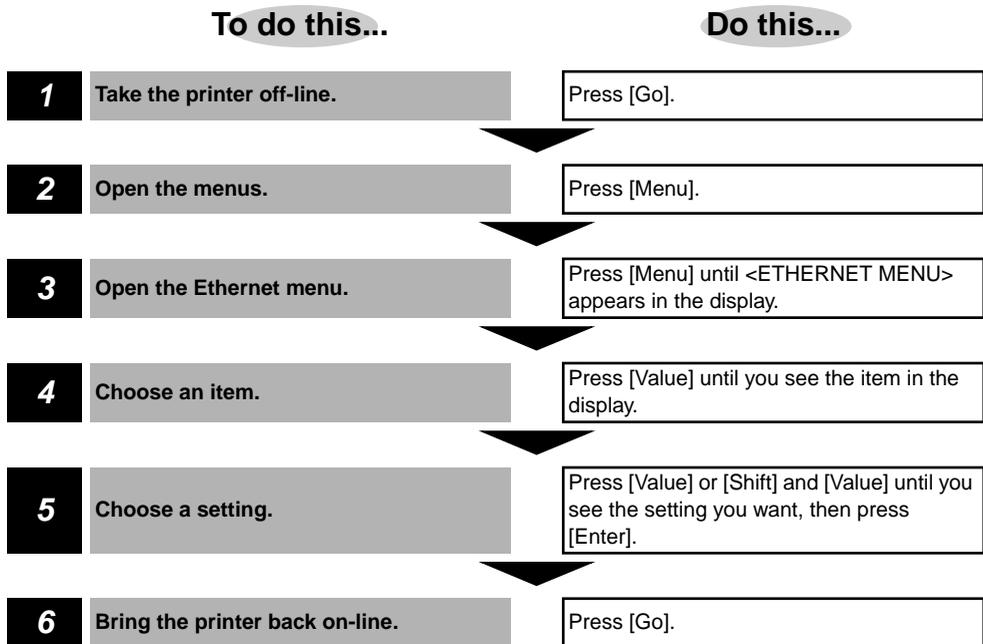
This menu is used to specify the default printer personality and interface settings for jobs received via the optional Canon Ethernet Board EB-65 network card. This menu will only appear if the optional network card has been installed. See “ETHERNET MENU,” on p.7-32 for details of the various settings.

Operation flow for ETHERNET MENU

Use the example procedure below to open the ETHERNET MENU and specify the option you want to select.

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Summary of the Printer Menus



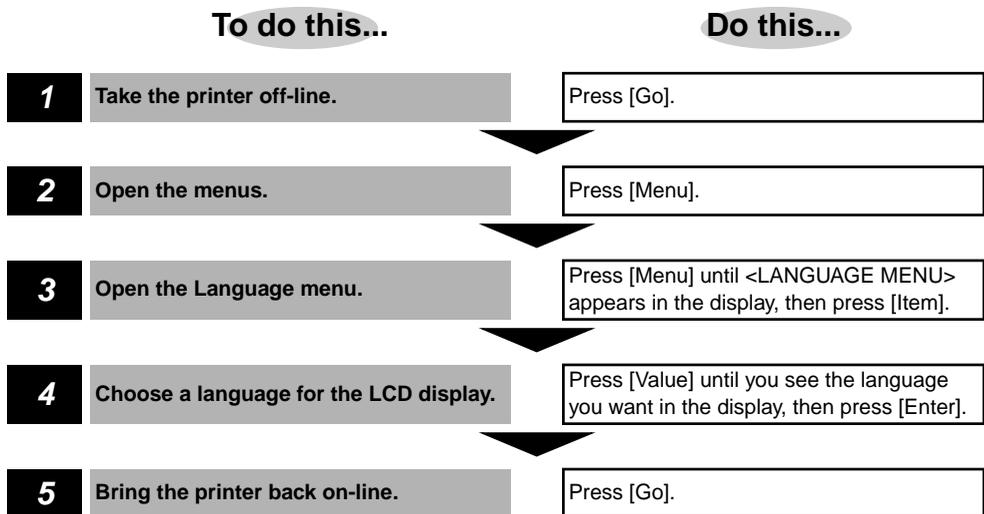
LANGUAGE MENU

About LANGUAGE MENU

This menu is used to specify the default language for the LCD display on the printer control panel. See “LANGUAGE MENU,” on p.7-35 for details of the various options.

Operation flow for LANGUAGE MENU

Follow the procedure below to specify the language for the LCD display.



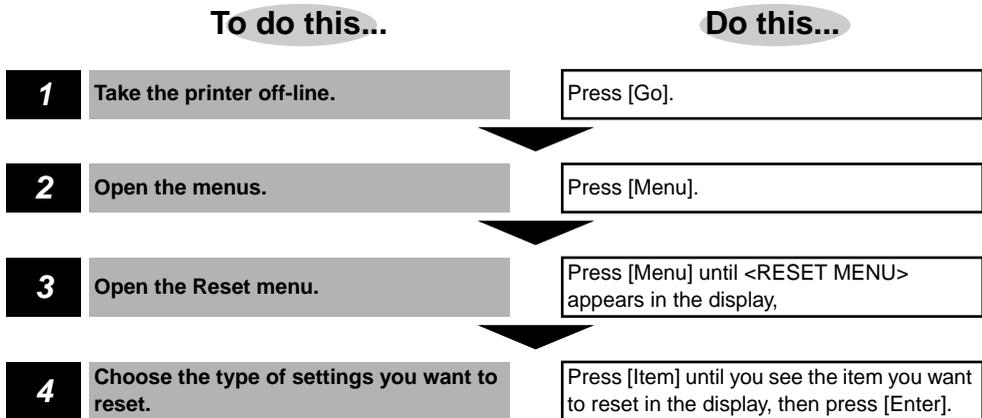
RESET MENU

About RESET MENU

This menu is used to reset various settings to their default values. See “RESET MENU,” on p.7-36 for details of the various items that can be reset.

Operation flow for RESET MENU

Use the example procedure below to open the RESET MENU and specify the type of settings you want to reset to their default values.



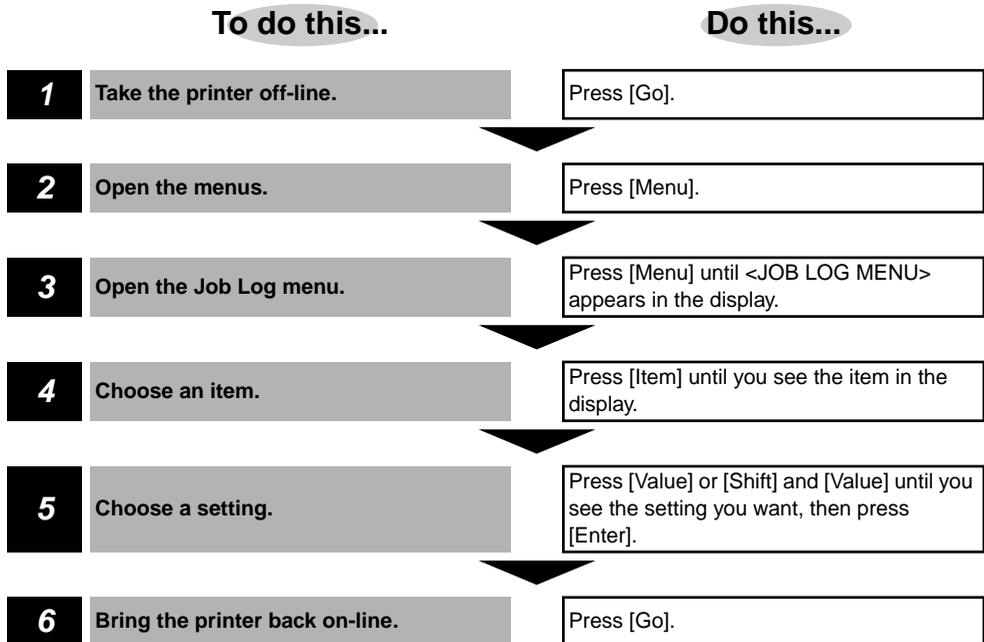
JOB LOG MENU

About JOB LOG MENU

This menu is used to specify various options for the job log. See “JOB LOG MENU,” on p.7-37 for details of the various settings.

Operation flow for JOB LOG MENU

Use the example procedure below to open the JOB LOG MENU and specify the option you want to select.



CHANGE PASSWORD

About the CHANGE PASSWORD Menu

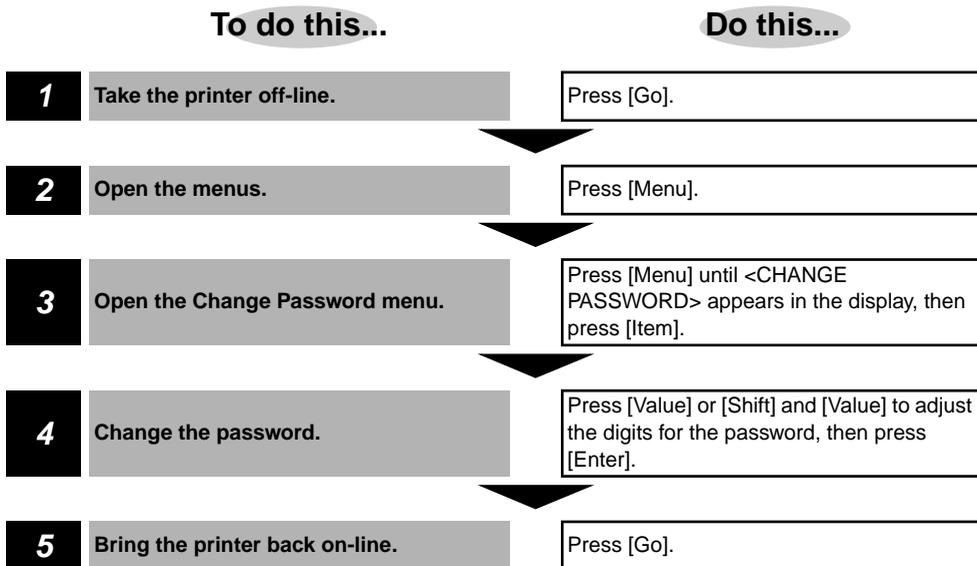
This menu is used to set or change the password for the printer. See “CHANGE PASSWORD,” on p.7-39 for details.

Operation flow for the CHANGE PASSWORD Menu

Use the procedure below to open the CHANGE PASSWORD menu and enter the new password for the printer.

 NOTE

- If you set a password with this setting, the menus from JOB CONTROL MENU onward can only be accessed by users (such as system managers) who have entered the password.



Printing Environment Settings

7

CHAPTER

This chapter explains how to adjust printer settings to meet your own particular requirements.

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List of Standard Printing Environment Settings

■ How to use the list

- Menus or items that require a printer option are indicated with an asterisk (*).
- The default values are shown in bold text.

<SHUTDOWN MENU>* (See p. 7-8)

Setting Name	Setting Options	Description
SHUT DOWN	YES, NO	Shuts down the printer.

<SECURED JOB MENU>* (See p. 7-9)

Setting Name	Setting Options	Description
ENTER PASSWORD	7 digits	Prompts you to enter the password required for printing the selected job.
PASSWORD	7 digits	Asks you to verify the password.
COPIES	1-999	Sets the number of copies to be printed for the secured print job.
INVALID PASSWORD REENTER	YES, NO	Asks whether or not you want to re-enter the password.

<TEST MENU> (See p. 7-10)

Setting Name	Setting Options	Description
SHOW PAGE COUNT	TOTAL SMALL LARGE	Displays the total number of pages printed. Displays the total number of small pages printed. Displays the total number of large pages printed.
TEST PRINT	-	Prints the Test Print page.
PRINT PCL FONTS	-	Prints the PCL Font List.
PRINT PS FONTS*	-	Prints the PS Font List.
PRINT JOB LOG	-	Prints the job log.
CONTINUOUS TEST	-	Prints the Test Print page continuously.
PRINT EN CONFIG	-	Prints the Ethernet configuration page.
CLEANING PAGE	-	Prints the cleaning page used to clean the fixing assembly.

7. Printing Environment Settings

CLEANING ROLLER

Used to clean the paper feed rollers in the multi-purpose tray.

<PCL MENU> (See p. 7-12)

Setting Name	Setting Options	Description
RESOLUTION	600	Displays the resolution used for printing.
COPIES	1-999	Sets the number of copies to be printed.
PAGE SIZE	LEGAL, A3, A4 , A5, B4, 11X17, EXEC, COM10, MONARCH, C5, DL, B5	Sets the default paper size to be used when printing from the printer.
ORIENTATION	PORTRAIT , LANDSCAPE	Sets the paper orientation.
FORM	5-64-128 lines	Sets the number of lines on a page.
FNTSRC	INTERNAL , SOFT, FLASH	Sets the font source.
FONTNUM	0 -999	Sets the font number.
PT.SIZE	4.00- 12.00 -999.75 point	Sets the default point size.
PITCH	0.44- 10.00 -99.99 cpi	Sets the default pitch.
SYMSET	ROMAN-8 , ISO L1, ISO L2, ISO L5, PC-8, PC-8 D/N, PC-850, PC-852, PC-8 TK, WIN L1, WIN L2, WIN L5, DESKTOP, PS TEXT, VN INTL, VN US, MS PUBL, MATH-8, PS MATH, VN MATH, PI FONT, LEGAL, ISO 4, ISO 6, ISO 11, ISO 15, ISO 17, ISO 21, ISO 60, ISO 69, WIN 3.0, MC TEXT, PC-775, PC-860, PC-865, PC-8 GR, PC-1004, ISO L6, WIN BALT	Sets the default symbol set.
AUTO CR	ON, OFF	Turns auto carriage return on or off.
WIDE A4	ON, OFF	Turns wide A4 on or off.
OVERRIDE	ON, OFF	Turns override on or off.

<PS MENU> (See p. 7-17)

Setting Name	Setting Options	Description
RESOLUTION	600	Displays the resolution of the printer.
COPIES	1-999	Sets the number of copies to print.
PRINT ERRS	ON, OFF	Specifies whether or not to print PS print errors.

<FEEDER MENU> (See p. 7-19)

Setting Name	Setting Options	Description
FEED	CASSETTE 1 , MPT, CASSETTE 2, CASSETTE 3, CASSETTE 4	Sets the paper source to be used when printing. (Cassettes 2 to 4 are only displayed if optional paper feed units have been installed.)
TRAY SWITCH	ON , OFF	Enables the printer to switch to another tray if the selected tray is empty.
MANUAL	ON, OFF	Turns manual feeding from the multi-purpose tray on or off.
MPT SIZE	LETTER, LEGAL, A3, A4 , A5, B4, 11X17, EXEC, COM10, MONARCH, C5, DL, B5, CUSTOM	Sets the default paper size for the multi-purpose tray,

<CONFIG MENU> (See p. 7-22)

Setting Name	Setting Options	Description
JAM RECOVERY	ON, OFF	Enables the printer to resume printing once a paper jam has been cleared.
AUTOCONT	ON , OFF	Turns the Automatic Continue function, for error handling, on or off.
DENSITY	0-7-15	Sets the relative darkness of the printouts.
PWRSVAV	3MIN, 15MIN , 30MIN, 1HR, 2HR, 3HR, 4HR, OFF	Sets the time interval the printers waits before switching to Power Saving mode.
ECONOMY MODE	ON, OFF	Turn Economy Mode, for reducing toner usage, on or off.
REFINE	ON , OFF	Enables the printer to enhance the quality of the printouts.

List of Advanced Printing Environment Settings

If you have set a password for the printer, you can only access these menu items after entering the password.

■ How to use the list

- Menus or items that require a printer option be installed, or other option, are indicated with an asterisk (*).
- The default values are shown in bold text.

<ENTER PASSWORD> (See p. 7-26)

Setting Name	Setting Options	Description
ENTER PASSWORD	14 digits	Sets the password for accessing more advanced settings.
INVALID PASSWORD REENTER	YES , NO	Enables you to re-enter the password, if the password entered is incorrect.

<JOB CONTROL MENU> (See p. 7-27)

Setting Name	Setting Options	Description
JOB SECURING TIMEOUT	2HR , 8HR, 24HR	Sets the length of time a secured job is held on the printer.
PRINT W/ USERID & PASSWORD	ON, OFF	Specifies whether or not to accept print jobs that do not have a user id and password.

<PARALLEL MENU> (See p. 7-28)

Setting Name	Setting Options	Description
PERSONALITY	AUTO , PCL, PS	Sets the default print personality for the parallel interface.
BIDIRECTION	ON , OFF	Specifies whether or not to use bi-directional control.
I/O TIMEOUT	5- 15 -3000	Sets the timeout interval for print jobs received via the parallel interface

<USB MENU> (See p. 7-30)

Setting Name	Setting Options	Description
PERSONALITY	AUTO , PCL, PS	Sets the default print personality for the USB port.

I/O TIMEOUT

5-15-3000

Sets the timeout interval for print jobs received via the USB port.

<ETHERNET MENU>* (See p. 7-32)

Setting Name	Setting Options	Description
PERSONALITY	AUTO , PS, PCL	Sets the default print personality for the optional network card.
I/O TIMEOUT	5-15-3000	Sets the timeout interval for the optional network card.
IP ADDRESS		Sets the IP address of the printer.
SUBNET MASK		Sets the Subnet Mask address of the printer.
GATEWAY ADDRESS		Sets the Gateway address of the printer.
MAC ADDRESS		Displays the MAC address of the printer.

<LANGUAGE MENU> (See p. 7-35)

Setting Name	Setting Options	Description
LANG	ENGLISH , DANISH, DUTCH, FINNISH, FRENCH, GERMAN, ITALIAN, NORWEGIAN, PORTUGUESE, SPANISH, SWEDISH	Sets the default language for the LCD display on the printer.

<RESET MENU> (See p. 7-36)

Setting Name	Setting Options	Description
RESET	MENU , FONTS, FORMS, STORED JOB, JOB LOG, ERR LOG, JAM LOG	Resets the selected settings to their default values.

<JOB LOG MENU> (See p. 7-37)

Setting Name	Setting Options	Description
AUTO PRINT LOG PER 50/30 JOBS	YES, NO	Specifies whether or not to automatically print the job log.
AUTO CLEAR LOG PER 50/30 JOBS	YES	Sets the printer to automatically clear the job log.
JOB LOG FULL	STOP, WARNING	Sets the default action for when the job log becomes full.
GMT DIFFERENTIAL TIME	-12-0-12	Sets the time difference from Greenwich Mean Time.
DAYLIGHT SAVING TIME	OFF , ON	Specifies whether or not to use daylight saving time.

7

Printing Environment Settings

<CHANGE PASSWORD> (See p. 7-39)

Setting Name	Setting Options	Description
NEW PASSWORD	14 digits	Sets a new password for the printer.
CONFIRM PASSWORD	14 digits	Confirms the new password, if it is the same as the setting above.
INVALID PASSWORD REENTER	YES, NO	Enables you to re-enter the password, if the password entered is incorrect.

SHUTDOWN MENU

SHUT DOWN

YES, NO

This setting enables you to shut down the printer.

YES

If there is a job in progress, the message <JOB IN PROGRESS +CANCEL/-CONT.> is displayed. Press [Value] to cancel the job and shut down the printer, or [Shift] and [Value] to continue printing the job.

If there are no jobs in progress, the printer shuts down and the message <SAFE TO TURN OFF PRINTER> is displayed. You can now turn off the power switch.

NO

Cancels the command.



IMPORTANT

- You should always use this menu to shut down the printer if the optional Canon Hard Disk HD-65 has been installed.

SECURED JOB MENU

This menu will only appear if there is a secured job stored on the printer. Secured jobs can only be stored on the printer if the optional Canon Hard Disk HD-65 has been installed.

ENTER PASSWORD

7 digits

This item is used to enter the password for the selected secured job, stored on the printer.

Press [Value] to increase the value of each digit in the password, or press [Shift] and [Value] to decrease the values.

Press [Item] or [Shift] and [Item] to select the digit you wish to change. Press [Enter] to accept the currently displayed password.

PASSWORD

7 digits

This is used to verify the password entered for the secured job.

COPIES

1 to 999

This specifies the number of copies to be printed for the selected job.

INVALID PASSWORD REENTER

YES, NO

This asks if you want to re-enter the password or not, if the password was incorrect.

TEST MENU

SHOW PAGE COUNT

xxx

This displays the number of pages printed by the printer.

TOTAL

This displays the total number of pages, of all sizes, printed by the printer.

SMALL

This displays the number small pages printed by the printer.

LARGE

This displays the number large pages printed by the printer.

7

TEST PRINT

-

Prints the Test Print and lists the printing environment settings. Also displays graphic and text printing capabilities.

PRINT PCL FONTS

-

Prints the PCL Font List.

PRINT PS FONTS

-

Available only after the PostScript module has been installed. Prints the PS Font List.

PRINT JOB LOG

-

Prints the Job Log.

PRINT EN CONFIG

-

Prints the Ethernet configuration page.



NOTE

- This item will only appear if the optional Canon Ethernet Board EB-65 network card has been installed.

CONTINUOUS TEST

-

Prints the Test Print continuously. To stop continuous printing, press Cancel.

CLEANING PAGE

-

Used to clean the fixing assembly.

CLEANING ROLLER

-

Used to clean the paper feed roller in the multi-purpose tray.



NOTE

- You will need to obtain a cleaning pad for the roller from your local dealer. Instructions for using the cleaning pad are included in the package.

PCL MENU

RESOLUTION

600

Displays the printer resolution in dots per inch (dpi) used for print jobs.

COPIES

1 to 999

Sets the number of copies to be printed for each print job.

1 copy is printed for each page.

To move to the next higher number, press [Value]; to quickly scroll to a higher number in increments of 10, press and hold down [Value]. To move to the next lower number, press [Shift] and [Value]; to quickly scroll to a lower number in decrements of 10, press and hold down [Shift] and [Value].

PAGE SIZE

LETTER, LEGAL, A3, A4, A5, B4, 11X17, EXEC, COM10, MONARCH, C5, DL, B5-JIS

Sets the size of the image the printer creates in the memory. The software application determines the image size. If the print job does not specify the image size, then PAGESIZE in the PCL MENU will be used.

LETTER	8 1/2 × 11 in.
LEGAL	8 1/2 × 14 in.
A5	148 × 210 mm
A4	210 × 297 mm
EXEC	7 1/4 × 10 1/2 in.
COM10	4 1/8 × 9 1/2 in. envelope
MONARCH	3 7/8 × 7 1/2 in. envelope
C5	162 × 229 mm envelope
DL	110 × 220 mm envelope
B5-JIS	182 × 257 mm

ORIENTATION

PORTRAIT, LANDSCAPE

Sets the direction of printing on the page to Portrait or Landscape. Printing across the width of the page is portrait orientation, and printing across the length of the page is landscape orientation.

PORTRAIT

Prints from left to right across the width of the page (letter style.)

LANDSCAPE

Prints from bottom to top across the length of the page. Landscape orientation is convenient for spreadsheets or other printouts that require increased width for printing. The printer can rotate all fonts to make any of the resident fonts available for either portrait or landscape printing.

FORM

5-64-128

This determines the number of lines of text printed on one page. Change this setting only if you have a software application that does not enable you to set the page length, lines per page, or lines per inch.

FNTSRC

INTERNAL, SOFT, FLASH

This (Font Source) setting enables you to set the default for font selection. After you print a font list, you will see the fonts listed as internal fonts, soft fonts, or flash fonts.

INTERNAL

Selects internal (resident) fonts.

SOFT

Selects permanent soft fonts. Permanent soft fonts are downloaded to the printer's memory by software applications. These fonts are not erased from memory once a job is completed. They remain in RAM until the printer is turned off.

FLASH

Selects fonts that have been downloaded and stored in the optional Flash ROM module.

FONTNUM

0, 1-999

This (Font Number) setting enables you set the default font by its number. The printer assigns a font number to every typeface. Print a PCL Font List to see the numbers assigned to the fonts. The font number (Font #) is the first column in the list. (See "PCL Font List Sample," on p.10-7)

0

Courier is selected unless you change the setting.

1-999

To increase the number, press [Value]. You can quickly scroll through the numbers in increments of 10 by holding down [Value]. To decrease the number, press [Shift] and [Value], or press and hold [Shift] and [Value] to scroll backwards quickly in decrements of 10.

7

PT. SIZE

4.00-**12.00**-999.75

When the selected font is a bitmap or fixed spacing font, this item will not appear for selection.

The Point Size setting is the measured vertical height of a typeface. There are 72 points per inch, so a 36-point font is half an inch high, measured from the top of the uppercase letters to the tail of the letter y.

12.00

The printer font source is set for 12-point.

4.00 to 999.75

To increase the number in increments of 0.25, press Value. To quickly scroll through the numbers in increments of 1.00, hold down Value.

To decrease the number in decrements of 0.25, press Shift and Value, or press and hold Shift and Value to quickly scroll backwards in decrements of 1.00.

PITCH

0.44-**10.00**-99.99

PITCH appears only if the font source you selected with FNTSRC (font source) and FONTNUM (font number) above is a scalable font in a fixed pitch typeface. Use this item to set the pitch of the font. Pitch is measured as the number of equally spaced characters per inch.

10.00

The selected pitch is 10 characters per inch.

0.44 to 99.99

To increase the number in increments of 0.01, press Value. To quickly scroll through the numbers in increments of 1.00, press and hold down Value.

To decrease the number in decrements of 0.01, press Shift and Value, or press and hold Shift and Value to quickly scroll backwards in decrements of 1.00.

SYMSET

ROMAN-8, ISO L1, ISO L2, ISO L5, PC-8, PC-8 D/N, PC-850, PC-852, PC-8 TK, WIN L1, WIN L2, WIN L5, DESKTOP, PS TEXT, VN INTL, VN US, MS PUBL, MATH-8, PS MATH, VN MATH, PI FONT, LEGAL, ISO 4, ISO 6, ISO 11, ISO 15, ISO 17, ISO 21, ISO 60, ISO 69, WIN 3.0, MC TEXT, PC-775, PC-860, PC-865, PC-8 GR, PC-1004, ISO L6, WIN BALT

SYMSET (symbol set) enables you to select the symbol set, a collection of letters, numbers, punctuation marks and special symbols.

The Appendix shows the names of internal symbol sets you can select. (See "Symbol Sets Supported," on p.10-18)

If the currently selected font does not support the orientation or symbol set you have selected, the control panel font selection returns to the factory default setting.

AUTO CR

ON, **OFF**

This appends a CR (carriage return) to each line feed for the print job. Some environments, such as UNIX, indicate a new line using only the line feed control code. This option automatically appends the required CR to each line feed.

If the currently selected font does not support the orientation or symbol set you have selected, the control panel font selection returns to the factory default setting.

OFF

The printer does not append a CR to each line feed.

ON

The printer appends a CR to each line feed automatically.

WIDE A4

ON, OFF

WIDE A4 changes the number of characters that can be printed on a single line of A4 paper. This feature only applies to A4 paper. When this feature is set to ON, the right and left margins narrow to about 3 mm (1/8 in.)

OFF

Up to seventy-eight 10-pitch characters can be printed on one line.

ON

Up to eighty 10-pitch characters can be printed on one line.

OVERRIDE

ON, OFF

This changes LTR (Letter) size requests from the printer driver to A4 size or vice versa. Either A4 or Letter-size paper should be loaded in the printer.

OFF

The printer does not override paper size A4 with letter or vice versa.

ON

The printer overrides paper size A4 with letter or vice versa.

PS MENU

This menu is only displayed if the optional Canon Adobe PostScript 3 Module A-65 has been installed.

RESOLUTION

600

Displays the printer resolution in dots per inch (dpi) used for print jobs.

COPIES

1 to 999

Sets the number of copies printed for each print job.

1

One copy is printed for each page.

1 to 999

To increase the number, press [Value], or to quickly scroll to a higher number in increments of 10, press and hold down [Value].

To decrease the number, press [Shift] and [Value], or to quickly scroll to a lower number in decrements of 10, press and hold down [Shift] and [Value].

PRINT ERRS

ON, **OFF**

This setting (print errors) turns on the error report feature so the printer prints an error report every time an error occurs.

OFF

A print error status report is not printed.

ON

A print error status report is printed. Because no error messages are displayed on the printer control panel during PostScript printing, you may want to turn this feature on for PostScript printing.

FEEDER MENU

FEED

CASSETTE1, MPT, CASSETTE2, CASSETTE3, CASSETTE4

FEED (feed source) enables you to determine the paper source. The software application selects the paper source. If the print job does not specify the paper feed source, then FEEDER MENU settings will be used. If the paper size you have selected is not loaded, the printer will display a message to tell you which tray to load the required paper size into.

CASSETTE1

Sets the standard 250-sheet universal cassette as the paper feed source.

MPT

Sets the multi-purpose tray as the paper feed source to function as an automatic feed tray.

The multi-purpose tray performs two important functions. Firstly, it can be used as an automatic feed tray for standard or special media such as transparent film or adhesive labels, etc. Secondly, it can also be used as a manual feed tray for feeding media one sheet at a time. See "Using the Multi-Purpose Tray as a Manual Feed Station," on p.3-24.

CASSETTE<2-4>

Sets the optional 250-sheet paper feed unit as the paper feed source. This item only appears when the optional 250-sheet paper feed units have been installed.

TRAY SWITCH

ON, OFF

TRAY SWITCH enables the printer to switch paper feed to another tray if the selected tray is out of paper or contains the wrong size paper.

ON

The printer checks the other trays in order of capacity: standard 250 Sheet Universal Cassette, optional 250 Sheet Paper Feed Unit (if installed), Multi-Purpose tray.

OFF

The printer displays an error message and asks you to load the correct paper in the tray.

MANUAL

ON, OFF

MANUAL sets feeding to manual from the multi-purpose tray, one sheet at a time.

OFF

Leave manual feed off unless you intend to use the tray as a manual feed station.

ON

The printer displays a message and prompts you to load the correct paper size manually. Press Go to print the page. If more than one page is to be printed, you must press Go each time to print a page.

MPTSIZE

LETTER, LEGAL, A3, A4, A5, B4, 11X17, EXEC, COM10, MONARCH, C5, DL, B5-JIS, CUSTOM

This setting enables you set the size of the media to be fed from the tray. The tray has no paper size sensing mechanism, so you need to ensure this is set before you print from the tray.

ON

The printer checks the other trays in order of capacity: standard 250 Sheet Universal Cassette, optional 250 Sheet Paper Feed Unit (if installed), Multi-Purpose tray.

OFF

The printer displays an error message and asks you to load the correct paper in the tray.

LETTER	8 1/2 × 11 in.
LEGAL	8 1/2 × 14 in.
A5	148 × 210 mm
A4	210 × 297 mm
EXEC	7 1/4 × 10 1/2 in.

COM10	4 1/8 × 9 1/2 in. envelope
MONARCH	3 7/8 × 7 1/2 in. envelope
C5	162 × 229 mm envelope
DL	110 × 220 mm envelope
B5-JIS	182 × 257 mm
CUSTOM	From the multi-purpose tray or manual feed

CONFIG MENU

JAM RECOVERY

ON, OFF

This setting enables printing to resume automatically once a paper jam has been removed. JAM RECOVERY can be set for PCL and PostScript personalities.

OFF

The printer does not resume printing automatically after the paper jam has been removed. You must start the print again. You may want to use this setting to conserve memory.

ON

The printer reserves enough memory to hold the data for the page that jams and automatically reprints the page that jammed. With this setting, printing speed is slightly slower. Use this setting if there is sufficient memory available.

AUTOCONT

ON, OFF

AUTOCONT (automatic continue) determines how the printer reacts to errors. If the printer is part of a network or remote spooling system, then set AUTOCONT=ON.

ON

The printer displays a message, goes off-line for about 10 seconds and then automatically goes back on-line and resumes printing.

OFF

The printer displays a message, goes off-line and waits for you to correct the problem. Press Go to resume operation.

DENSITY

0-7-15

This setting refers to the relative darkness of print on the paper.

For a darker setting, select a higher number. A darker setting consumes more toner.

For a lighter setting, select a lower number. A lighter setting consumes less toner.

7

Standard density setting.

0 to 15

Press [Value] to move to a higher number. Press and hold to scroll through the settings quickly.

Press [Shift] and [Value] to move to a lower number. Press and hold to scroll back through the settings quickly. If the buffer is large, the printer will be able to smoothly handle all data sent from the computer.

PWRS AV

3MIN, **15MIN**, 30MIN, 1HR, 2HR, 3HR, 4HR

PWRS AV (Power Save) enables you to set the amount of time the printer sits idle at full power before the fuser unit shuts down. This feature reduces power consumption when the printer is not being used for a long period. The printer will start warming up again as soon as you send a print job to the printer, press one of the keys on the control panel, open the front cover, or remove a paper cassette.

3MIN

The printer enters the power saving mode after the printer remains idle for three minutes.

15MIN

The printer enters the power saving mode after the printer remains idle for 15 minutes.

30MIN

The printer enters the power saving mode after the printer remains idle for 30 minutes.

1HR

The printer enters the power saving mode after the printer remains idle for one hour.

2HR

The printer enters the power saving mode after the printer remains idle for two minutes.

3HR

The printer enters the power saving mode after the printer remains idle for three hours.

4HR

The printer enters the power saving mode after the printer remains idle for four hours.

ECONOMY MODE

ON, OFF

ECONOMY MODE is a cost saving feature that can extend the life of your toner cartridge by using less toner to print documents. Documents printed in the economy mode are lighter, but ideal for printing and checking rough drafts. The economy mode is similar to the draft mode found on some dot matrix printers.

OFF

The printer uses a normal amount of toner for printing.

ON

The printer uses less toner for printing and the printed page appears much lighter.

REFINE

ON, OFF

This setting enables you to enhance the print quality of characters and graphics by smoothing the gradations (so-called “jaggies”) along the angles and curves of printed images.

OFF

No automatic image refinement.

ON

Printing with automatic image refinement. Jagged stepping along angles and curves is smoothed.



ENTER PASSWORD

ENTER PASSWORD

14 digits

This setting is used to set the password for the printer.

Press [Value] to increase the value of each number in the password, or press [Shift] and [Value] to decrease the number.

Press [Item] or [Shift] and [Item] to select the number you wish to change. Press [Enter] to accept the currently displayed password.

INVALID PASSWORD REENTER

YES, NO

This is used to specify whether, or not, you want to re-enter the password, if the password entered is incorrect.

YES

This enables you to re-enter the password.

NO

Exits the password menus.

JOB CONTROL MENU

JOB SECURING TIMEOUT

2HR, 8HR, 24HR

This setting specifies the amount of time a job is held on the printer.

2HR

Stores a job for two hours.

8HR

Stores a job for eight hours.

24H

Stores a job for 24 hours.

PRINT W/ USERID & PASSWORD

ON, OFF

This setting specifies whether or not the printer should print jobs that do not include a user ID or password.

OFF

The printer does not print jobs unless they include a user ID or password.

ON

Prints jobs even if they do not include a user ID or password.

PARALLEL MENU

PERSONALITY

AUTO, PCL, PS

PERSONALITY is displayed only after the Adobe PostScript 3 module is installed. Until you install the module, PCL is the standard personality of your printer.

With this setting you can set the parallel port for automatic personality switching or dedicate the parallel port for only one personality. This feature sets the personality only for printer streams received on the parallel port.

AUTO

The printer samples the print stream on the parallel port and automatically switches to the personality required to print the job.

PCL

The parallel port is dedicated to the PCL personality and will print only PCL data and will not switch to the PostScript personality if a PostScript print stream is received on the parallel port. However, special commands sent to the printer with the print stream can force the printer to switch to the PostScript personality.

PS

The parallel port is dedicated to the PostScript personality and will print only PostScript data and will not switch to the PCL personality if a PCL print stream is received on the parallel port. However, special commands sent to the printer with the print stream can force the printer to switch to the PCL personality.

BIDIRECTION

ON, OFF

BIDIRECTION is the ability of the printer to send status read-back messages to the host computer. Although this feature increases reliability in operation, personality switching may be slower.

ON

The printer sends queries and responses about its status to the host computer.

OFF

No query/response and status output from the printer to the host.

I/O TIMEOUT

5-15-3000 sec.

I/O TIMEOUT (input/output timeout) is the amount of time (measured in seconds) that the printer waits for more data before it ends a print job. If data from other ports frequently arrives during a print job, increase the setting.

This timeout setting is for the parallel interface only.

15

The timeout is set for 15 seconds.

5 to 3000

To increase the number, press [Value], to quickly scroll to a higher number in increments of 10, press and hold down [Value].

To decrease the number, press [Shift] and [Value]; to quickly scroll back to a lower number in decrements of 10, press and hold down [Shift] and [Value].

USB MENU

PERSONALITY

AUTO, PCL, PS

PERSONALITY is displayed only after the Adobe PostScript 3 module is installed. Until you install the module, PCL is the standard personality of your printer.

With this setting you can set the USB port for automatic personality switching or dedicate the USB port to only one personality. This feature sets the personality only for printer streams received via the USB port.

AUTO

The printer samples the print stream on the USB port and automatically switches to the personality required to print the job.

PCL

The USB port is dedicated to the PCL personality and will print only PCL data and will not switch to the PostScript personality if a PostScript print stream is received on the USB port. However, special commands sent to the printer with the print stream can force the printer to switch to the PostScript personality.

PS

The USB port is dedicated to the PostScript personality and will print only PostScript data and will not switch to the PCL personality if a PCL print stream is received on the USB port. However, special commands sent to the printer with the print stream can force the printer to switch to the PCL personality.

I/O TIMEOUT

5-15-3000 sec.

The I/O TIMEOUT (input/output timeout) setting is the amount of time (measured in seconds) that the printer waits for more data before it ends a print job. If data from other ports frequently arrives during a print job, increase the setting.

This timeout setting is for the USB interface only.

15

The timeout is set for 15 seconds.

5 to 3000

To increase the number, press [Value]; to quickly scroll to a higher number in increments of 10, press and hold down [Value].

To decrease the number, press [Shift] and [Value]; to quickly scroll back to a lower number in decrements of 10, press and hold down [Shift] and [Value].

ETHERNET MENU

The ETHERNET MENU is only displayed when the optional Canon Ethernet Board EB-65 is installed.

PERSONALITY

AUTO, PS, PCL

PERSONALITY is displayed only after the Adobe PostScript 3 module is installed. Until you install the module, PCL is the standard personality of your printer.

With this setting you can set the network card for automatic personality switching or dedicate the network card to only one personality. This feature sets the personality only for printer streams received via the network card.

AUTO

The printer samples the print stream from the network and automatically switches to the personality required to print the job. This setting is recommended when using the printer on a network.

PS

The network card is dedicated to the PostScript personality and will print only PostScript data and will not switch to the PCL personality if a PCL print stream is received on the parallel port. However, special commands sent to the printer with the print stream can force the printer to switch to the PCL personality.

PCL

The network card is dedicated to the PCL personality and will print only PCL data and will not switch to the PostScript personality if a PostScript print stream is received from the network. However, special commands sent to the printer with the print stream can force the printer to switch to the PostScript personality.

I/O TIMEOUT

5-15-3000 sec.

I/O TIMEOUT (input/output timeout) is the amount of time (measured in seconds) that the printer waits for more data before it ends a print job. If data from other ports frequently arrives during a print job, increase the setting.

This timeout setting is for the Ethernet network card only.

15

The timeout is set for 15 seconds.

5 to 3000

To increase the number, press [Value], to quickly scroll to a higher number in increments of 10, press and hold down [Value].

To decrease the number, press [Shift] and [Value], to quickly scroll back to a lower number in decrements of 10, press and hold down [Shift] and [Value].

IP ADDRESS

0.0.0.0

Each octet in the series of four numbers can be set between 0 and 255. This setting should only be modified by a system administrator.

To increase the number for the selected octet in the series (enclosed in square brackets [000]), press [Value], to quickly scroll to a higher number in increments of 1, press and hold down [Value].

To decrease the number for the selected octet in the series, press [Shift] and [Value], to quickly scroll back to a lower number in decrements of 1, press and hold down [Shift] and [Value].

To move to the next octet in the series, press [Enter], to move back through the series, press [Shift] and [Enter].

SUBNET MASK

0.0.0.0

Each octet in the series of four numbers can be set between 0 and 255. This setting should only be modified by a system administrator.

To increase the number for the selected octet in the series (enclosed in square brackets [000]), press [Value], to quickly scroll to a higher number in increments of 1, press and hold down [Value].

To decrease the number for the selected octet in the series, press [Shift] and [Value], to quickly scroll back to a lower number in decrements of 1, press and hold down [Shift] and [Value].

To move to the next octet in the series, press [Enter], to move back through the series, press [Shift] and [Enter].

GATEWAY ADDRESS

0.0.0.0

Each octet in the series of four numbers can be set between 0 and 255. This setting should only be modified by a system administrator.

To increase the number for the selected octet in the series (enclosed in square brackets [000]), press [Value], to quickly scroll to a higher number in increments of 1, press and hold down [Value].

To decrease the number for the selected octet in the series, press [Shift] and [Value], to quickly scroll back to a lower number in decrements of 1, press and hold down [Shift] and [Value].

To move to the next octet in the series, press [Enter], to move back through the series, press [Shift] and [Enter].

MAC ADDRESS

MAC ADDRESS is used to display the MAC address of the printer. You cannot modify this setting.

LANGUAGE MENU

LANG

ENGLISH, DANISH, DUTCH, FINNISH, FRENCH, GERMAN, ITALIAN,
NORWEGIAN, PORTUGUESE, SPANISH, SWEDISH

The LANG setting allows you to select the default language setting used for the display messages and menu items on the printer control panel.

RESET MENU

RESET

MENU, FONTS, FORMS, STORED JOB, JOB LOG, ERR LOG, JAM LOG

This resets various settings to their default values.

MENU

Resets most menu items to their default values.

FONTS

Clears memory of all fonts.

FORMS

Clears memory of all forms

STORED JOB

Clears memory of all stored jobs.



IMPORTANT

- Always make sure that the On Line indicator is not blinking before pressing the [Enter] key to confirm the <RESET=STORED JOB> message. Otherwise, data for any jobs being processed by the printer will be lost.

JOB LOG

Clears the log job.

ERR LOG

Clears the error log.

JAM LOG

Clears the jam log.

JOB LOG MENU

This menu is used to control the job log.

AUTO PRINT LOG PER 50/30 JOBS

YES, NO

This setting allows you to specify whether or not to print the job log after a certain number of jobs have been stored in the log. If you are using the optional hard disk, the job log is printed after every 50 jobs. Otherwise, the log is printed after every 30 jobs.

YES

Prints the job log automatically after every 50 or 30 jobs.

NO

Does not print the job log.

AUTO CLEAR LOG PER 50/30 JOBS

YES

This setting allows you to specify whether or not to clear the job log after a certain number of jobs have been stored in the log. If you are using the optional hard disk, the job log is cleared after every 50 jobs. Otherwise, the log is cleared after every 30 jobs.

YES

Clears the job log automatically after every 50 or 30 jobs.

JOB LOG FULL

STOP, WARNING

This setting specifies how the printer should respond when the job log becomes full. The job log can store information for up to 50 jobs if the optional Canon Hard Disk HD-65 has been installed and up to 30 jobs if the hard disk has not been installed.

STOP

The printer stops printing when the job log become full.

WARNING

The printer displays a warning message when the job log becomes full, but does not stop printing.

GMT DIFFERENTIAL TIME

-12-0-12

This setting specifies the time difference from GMT (Greenwich Mean Time) for the time zone where the printer is being used.

0

No difference from GMT.

-12 to 12

To increase the number, press [Value]. To decrease the number, press [Shift] and [Value].

7

DAYLIGHT SAVING TIME

ON, OFF

This settings specifies whether or not daylight saving time is used in the time zone where the printer is being used.

ON

Daylight saving time is used.

OFF

Daylight saving time is not being used.

CHANGE PASSWORD

NEW PASSWORD

14 digits

This setting is used to set a new password for the printer.

Press [Value] to increase the value of each number in the password, or press [Shift] and [Value] to decrease the number.

Press [Item] or [Shift] and [Item] to select the number you wish to change. Press [Enter] to accept the currently displayed password.

CONFIRM PASSWORD

14 digits

This is used to verify the password.

INVALID PASSWORD REENTER

YES, NO

This is used to specify whether, or not, you want to re-enter the password, if the password entered is incorrect.

YES

This enables you to re-enter the password.

NO

Exits the password menu.

Maintenance

8

CHAPTER

This chapter explains how to perform maintenance such as replacing the toner cartridge and cleaning.

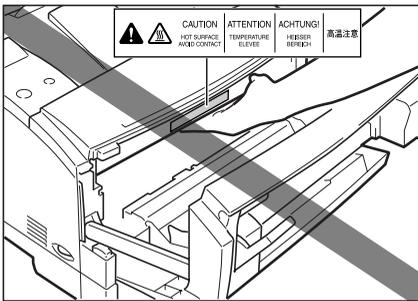
Replacing the Toner Cartridge	8-2
When to Replace the Toner Cartridge	8-3
Replacing the Toner Cartridge	8-9
Handling Toner Cartridges	8-15
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Cleaning the Printer	8-20
Cleaning the Fixing Roller	8-22
Printing a Cleaning Page	8-22
Cleaning the Fixing Roller	8-23
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Replacing the Toner Cartridge

Toner cartridges are replaceable. When the cartridge is almost out of toner, the message <TONER LOW> will appear on the display. When message is indicated on the display, first try the following procedure. Then, if necessary, replace the toner cartridge with a new one. Be sure to clean the fixing roller when replacing the toner cartridge.

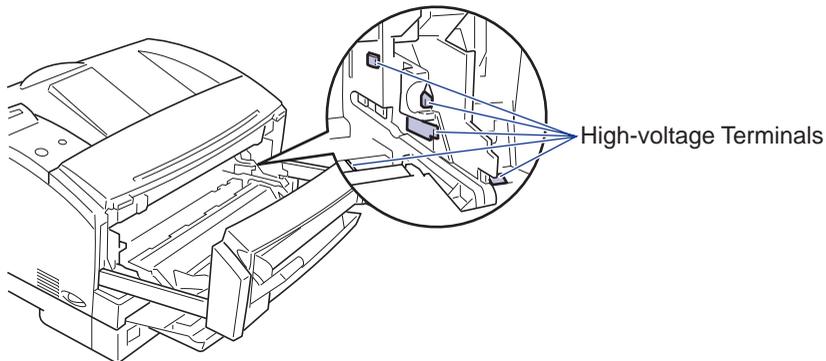
WARNING

- The fixing assembly inside the printer gets extremely hot. Be careful not to touch any of the parts inside the cover except those specified in this manual. Doing so may result in personal injury, or burns.



IMPORTANT

- Never touch the high-voltage contact points inside the front cover. This could damage the printer.



- The toner cartridge has a life span up to approximately 10000 copies when A4-size paper is printed in landscape orientation. This is based on printing typical word processing documents that have about 5% page coverage with the print density adjusted to the factory default. The life of your cartridge may vary depending on how it is used. If your average document contains a lot of graphics, shading or bold printing, then the life of the toner cartridge will be shorter.

When to Replace the Toner Cartridge

Before Replacing the Toner Cartridge

You can use the following simple procedure to extend the life of the cartridge:

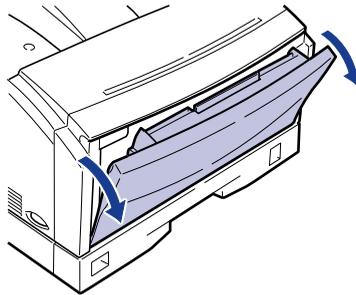
WARNING

- If you get loose toner powder on your hands or clothing, wash it off with cold water immediately.

NOTE

- <TONER LOW> is a warning message that indicates there is not much toner remaining in the toner cartridge. The printer will not stop printing.

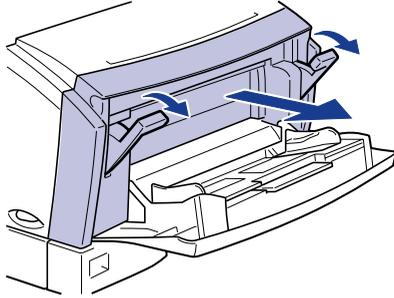
- 1** Grasp the tabs on either side of the multi-purpose tray and pull it open.



IMPORTANT

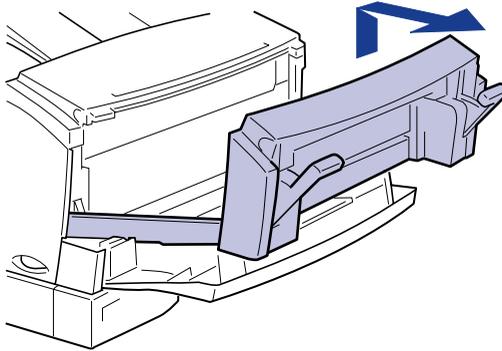
- Support the tray with both hands when opening it.

- 2** Pull the two grey release levers inside the multi-purpose tray area towards you, then pull the front cover forwards until it stops.



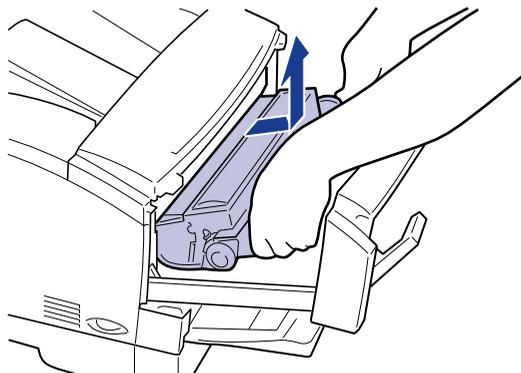
IMPORTANT

- Do not touch the transport roller or the discharger inside the front cover. This could reduce the printing quality.
- If you find it difficult to conduct this procedure, try to pull out the front cover by lifting it slightly. This will make it easier to remove the front cover.



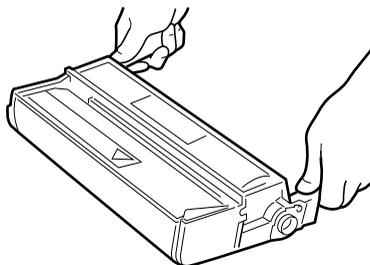
- Place the front cover in a safe place where it will not be damaged, or cause an obstruction.

- 3** Remove the toner cartridge from the printer by grasping it by the right and left handles and pulling it out horizontally.

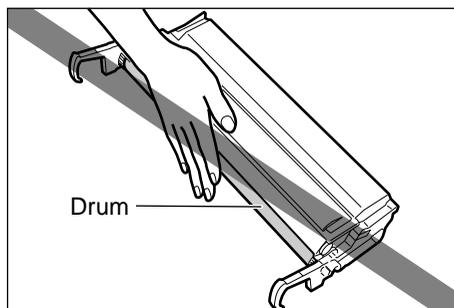


IMPORTANT

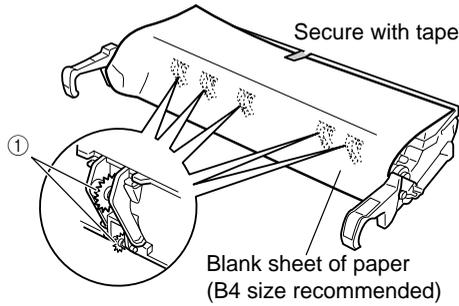
- Be sure to handle the toner cartridge carefully. Hold the toner cartridge as illustrated below and handle it with the arrow-mark face up. Never stand the toner cartridge on end or turn it upside down.



- Do not touch the drum located inside the toner cartridge.



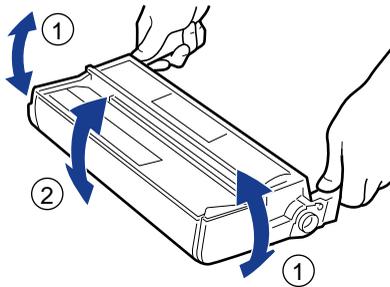
- Take care not to damage the drum located inside the toner cartridge.



- If you remove the cartridge from the printer place it in its bag immediately, or wrap the cartridge in a sheet of paper (B4-size is recommended) to prevent dust adhering to the drum, then wrap the cartridge in a thick cloth. When wrapping the paper around the cartridge, take care not to damage the gear-like parts on the top of the cartridge.

4 Hold the cartridge as shown and then rock it slowly back and forth to distribute the toner evenly inside the cartridge.

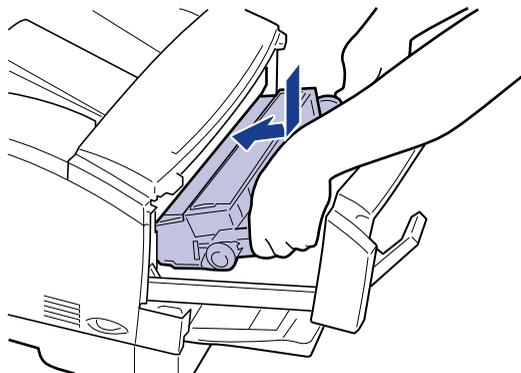
Rock the toner gently, taking care not to spill the toner.



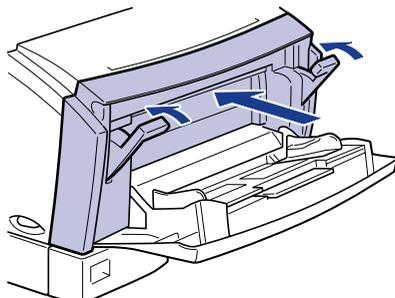
IMPORTANT

- If the toner is not evenly distributed inside the cartridge, this may reduce print quality.

- 5** Hold the toner cartridge with both hands as illustrated below, insert it back into the printer as far as it will go with the projections on both sides aligned with the toner cartridge guides located inside the main unit.



- 6** Close the front cover and push the two grey release levers back into position to lock the cover in place.



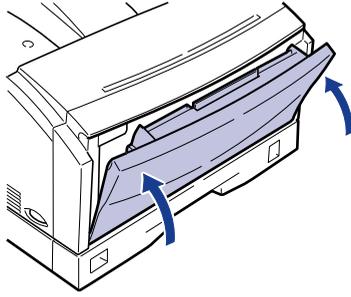
If the message will not go out from the display or print quality begins to fade, purchase a new toner cartridge for replacement.

If the printed text is still streaked or faded, it is time to replace the toner cartridge. Follow the procedure in the next section to replace the toner cartridge.

 **IMPORTANT**

- If the toner cartridge is not correctly installed, the front cover cannot be fully closed. Do not try to force the front cover to close, as this could damage it. If you cannot fully close the front cover, open it again and check the installation of the toner cartridge.
- Even if the printed text is satisfactory, you will have to replace the cartridge in the near future. Be sure you have a new cartridge on hand.
- Do not leave the front cover open for a long time after installing a toner cartridge.

7 Close the multi-purpose tray.



Replacing the Toner Cartridge

Follow the instructions below to replace the toner cartridge.

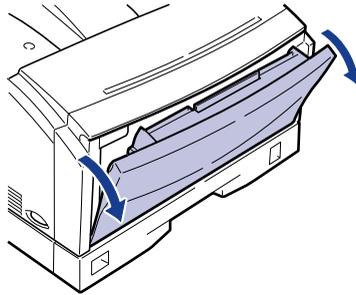
WARNING

- To avoid a fire or personal injury, never attempt to incinerate a used toner cartridge. Toner residue inside the cartridge is flammable and if scattered near an open flame it may result in a fire or personal injury.

CAUTION

- If you get loose toner powder on your hands or clothing, wash it off with cold water immediately.
- Do not put your hand inside the front cover immediately after the printer has been used as the fixing assembly inside the printer gets extremely hot. Be careful not to touch any of the parts inside the cover except those specified in this manual. Doing so may result in personal injury, or burns.

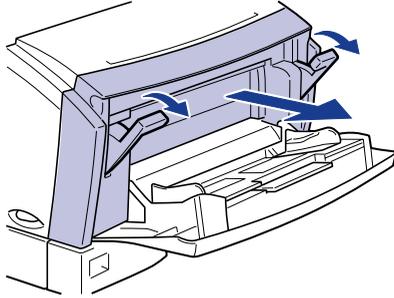
- 1** When the printer has stopped printing, grasp the tabs on either side of the multi-purpose tray and pull it open.



IMPORTANT

- Support the tray with both hands when opening it.

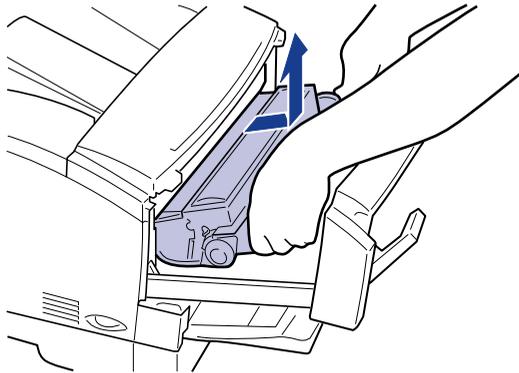
- 2** Pull the two grey release levers inside the multi-purpose tray area towards you, then pull the front cover forwards until it stops.



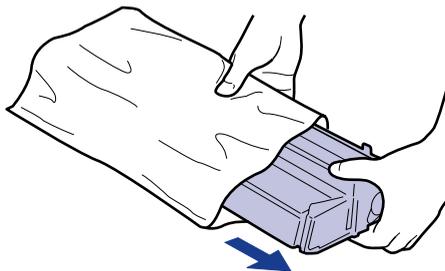
IMPORTANT

- Do not touch the transport roller or the discharger inside the front cover. This could reduce the printing quality.

- 3** Remove the toner cartridge from the printer by grasping it by the right and left handles and pulling it out horizontally.

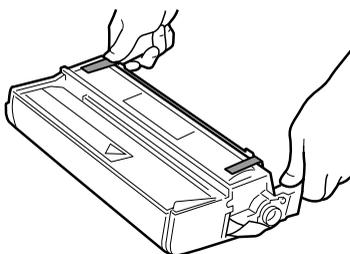


4 Remove the new toner cartridge from its protective bag.



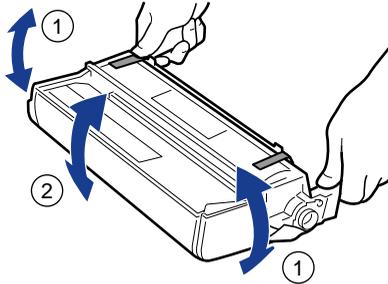
IMPORTANT

- We recommend that you use Canon toner cartridges for optimum printing results.
- Before you install the cartridge, ensure it has adjusted to room temperature especially if the toner cartridge has been moved from a cold to a warm location. If a cold cartridge is installed in the printer, condensation may form inside the cartridge and cause a reduction in print quality.
- Before you install the cartridge, check the expiration date printed on the box. Old toner cartridges can cause poor print quality. Always use a cartridge before its expiration date.



- Save the protective bag. You may need it later if you have to remove the toner cartridge from the printer.
- We recommend that you clean the fixing assembly and clean the transport guide area with a soft clean cloth, each time you replace the toner cartridge.

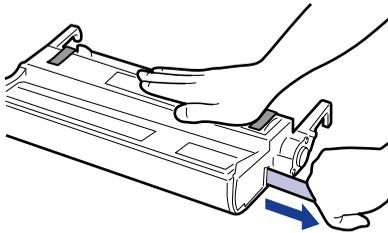
- 5** Hold the toner cartridge as illustrated below and gently rock it 5 or 6 times in lateral direction ①, then another 5 or 6 times in vertical direction ② to distribute the toner evenly.



IMPORTANT

- If toner is not evenly distributed inside the cartridge, it can cause streaking or fading on the printed page.
- When installing the toner cartridge, do not touch the drum's protective shutter, as it could be opened accidentally.

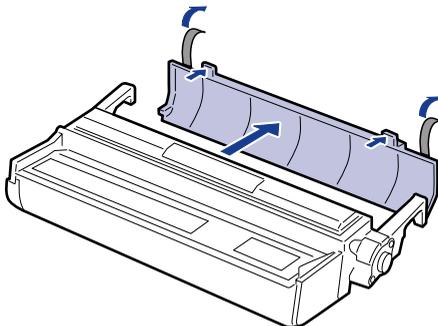
- 6** Place the toner cartridge on a flat surface, then while securing the cartridge with one hand, slowly pull out the sealing tape in a straight line to remove it.



IMPORTANT

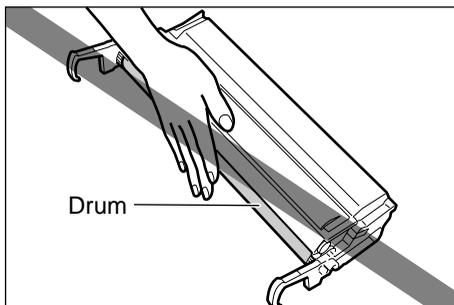
- To avoid breaking the tape, do not pull the tape out at an upwards or downwards angle.
- If you get loose toner powder on your hands or clothing, wash it off with cold water immediately.
- If the tab breaks off the tape, pull the tape out by pulling on the end of the tape where the tab was originally attached.
- Do not stop pulling the sealing tape part way. If you stop pulling it, loose toner will scatter around causing a reduction in print quality.
- Dispose of the sealing tape properly.

- 7** Remove the tapes attaching the protective cover to the toner cartridge. Then remove the protective cover by pressing the two levers on the top edge of the cover.



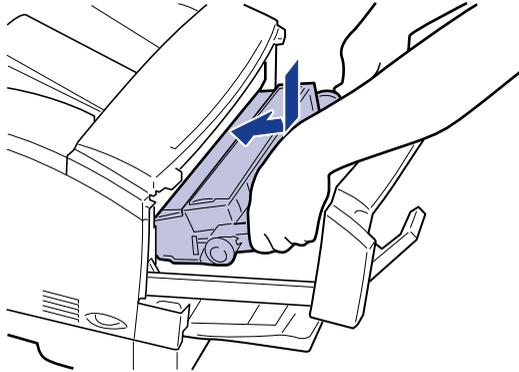
IMPORTANT

- Do not re-attach the protective cover once it has been removed as this may damage the drum.
- Do not touch the drum in the toner cartridge.

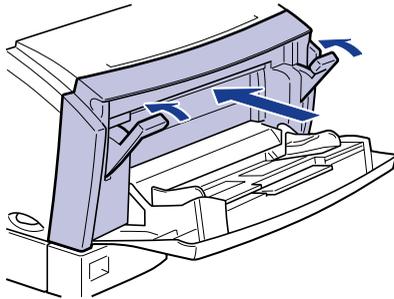


- Do not scratch the drum in the toner cartridge.

- 8** Grasp the handles of the toner cartridge as shown, then gently slide it into the printer as far as it will go with the projections at both sides aligned with the toner cartridge guides located inside the printer.



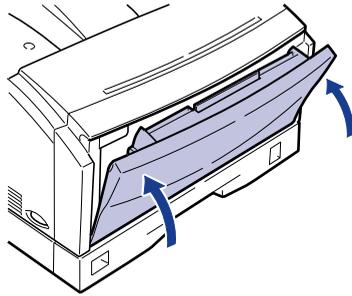
- 9** Close the front cover and push the two grey release levers back into position to lock the cover in place.



IMPORTANT

- If the toner cartridge is not correctly installed, the front cover will not close completely. Do not try to force the cover shut, as this could damage it. If you cannot close the front cover completely, open it and check the installation of the toner cartridge.
- Do not leave the front cover open for a long time after installing a toner cartridge.

10 Close the multi-purpose tray.



Then, clean the fixing roller. (See "Cleaning the Fixing Roller," on p.8-22)



● Recycling Toner Cartridges

Canon supports the collection of used toner cartridges for recycling. Toner cartridge recycling cannot succeed without your help. We would like to encourage you to support the Canon Cartridge Recycling Program and bring your used cartridge to the CANON distributor from which you have purchased the cartridge or to your nearest CANON dealer.

Handling Toner Cartridges

Toner cartridges consist of light-sensitive parts and precision parts. Rough handling of the toner cartridge can cause the cartridge to break or reduce the print quality. Follow the precautions in this section when installing or removing the toner cartridge.

⚠ WARNING

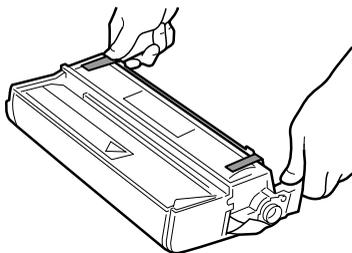
- To avoid fire and personal injury, never attempt to incinerate a used toner cartridge. Toner residue inside the cartridge is flammable.

⚠ CAUTION

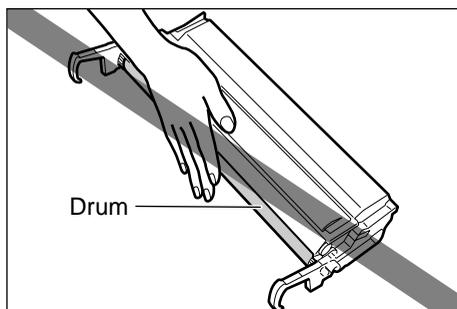
- If you get loose toner powder on your hands or clothing, wash it off with cold water.

🖐 IMPORTANT

- Do not re-attach the protective cover once it has been removed.
- Be sure to handle the toner cartridge carefully. Hold the toner cartridge correctly as illustrated below, with the arrow on top. Never stand the toner cartridge on end or turn it upside down.



- Do not touch the drum inside the toner cartridge with your hands.



- Take care not to damage the drum inside the toner cartridge.
- Do not leave or place the cartridge where it is exposed to direct sunlight.
- Keep the toner cartridge away from your computer screen, disk drives and disks—the magnets in the toner cartridge can erase valuable data.
- Never attempt to disassemble a toner cartridge.
- Condensation may form on a toner cartridge if it is subjected to extreme changes in temperature and/or humidity and adversely affect print quality. If you move the cartridge to a location that is warmer or has higher humidity, let it sit out of the box for about an hour. This will allow it to slowly adjust to the new temperature, preventing condensation from forming.
- We recommend that you use Canon toner cartridges for optimum printing results.
- Before you install the cartridge, check the expiration date printed on the box. Old toner cartridges can cause poor print quality. Always use a cartridge before its expiration date.
- Never store the toner cartridge in salty air or where there are corrosive gases (e.g. from aerosol sprays).

Storing Toner Cartridges

Follow the instructions listed here when storing replacement toner cartridges or cartridges removed from the printer for repair, or because you are moving the printer.



IMPORTANT

- Store the toner cartridge in its protective bag. Do not open the bag until you are ready to install the new toner cartridge in the printer.

- When you remove the toner cartridge from the printer, store it in the original protective bag or wrap a sheet of paper around the cartridge to prevent dust from accumulating on the drum, then wrap the cartridge in a piece of thick cloth.
- Always store toner cartridges flat with the arrow on the toner cartridge pointing up. Never stand the cartridge on end or turn it upside down.
- Do not store the cartridge where it is exposed to direct sunlight.
- Never store a toner cartridge at high temperature or humidity, or where the temperature or humidity can change suddenly.
 - Applicable temperature range for storage: 0-35°C (32-95°F)
 - Applicable humidity range for storage: 35-85% RH (relative humidity), without condensation
- Never store the toner cartridge in salty air or where there are corrosive gases (e.g. from aerosol sprays).
- Store the toner cartridge in a clean, dry location.
- Keep the toner cartridge away from devices that emit a magnetic field such as the display or main unit of your computer.
- Keep the toner cartridge away from your computer screen, disk drives and disks—the magnets in the toner cartridge can erase valuable data.
- Keep the toner cartridge out of the reach of children.

● Preventing Condensation

Condensation may form on a toner cartridge if it is subjected to extreme changes in temperature and/or humidity, which can adversely affect print quality. If you move the cartridge to a location that is warmer or has higher humidity, let it sit out of the box for about an hour. This will allow it to slowly adjust to the new temperature, preventing condensation from forming.

Adjusting the Print Density

Follow this procedure to adjust the print density. Adjust the print density if printed text on your page is too light or too dark. The default setting is <7>. The toner density can be adjusted through either the control panel or the driver software. Refer to the PCL Driver Guide for how to set the toner density from the driver software. To adjust it from the control panel of your printer, follow the procedure below.



1 Press [Go] to turn off the On Line indicator.

The printer goes off-line and is ready for settings to be made from the control panel.



2 Press [Menu] until you see <CONFIG MENU> in the top line.

CONFIG MENU



3 Press [Item] repeatedly until <DENSITY> appears.

DENSITY



4 Increase the density for a darker print, or decrease the density for a lighter print.

Shift



=6

Press [Value] to increase the number. The highest number you can set for the density is 15.

Hold down [Shift] and press [Value] to decrease the number. The lowest number you can set for the density is 0.

Enter/Cancel



5 When the setting you require is displayed, press [Enter].

Go



6 Press [Go] to bring the printer back on-line.

The On Line indicator comes on and the printer is ready for use.

Cleaning the Printer

Follow the instructions below to regularly clean the printer, so it remains in top operating condition and continues to deliver high quality performance.

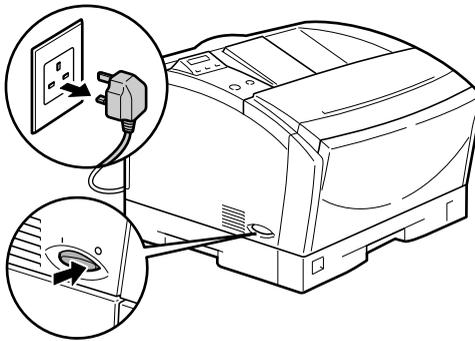
! WARNING

- Turn off the power switch and disconnect the power cord to clean the printer, not doing so may cause fire or electrical shock.
- Never use flammable solvent such as alcohol, benzene and thinner for cleaning. If flammable solvent adheres to electrical parts inside the main unit of the printer, this may result in fire or electrical shocks.

! IMPORTANT

- Never use any cleaning solvent other than water or water-diluted neutral detergent to prevent deterioration of or cracks in the plastic parts of the main unit of the printer.
- Be sure to dilute neutral detergent with water.
- Never attempt to lubricate the front cover, cassette protective cover or mechanism inside the main unit of the printer. The printer does not require lubrication.

- 1** Press the “○” side of the power switch to turn off the printer. Disconnect the power cord from the AC outlet.

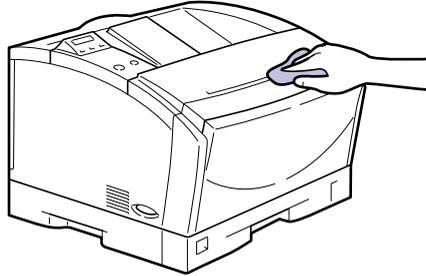


! IMPORTANT

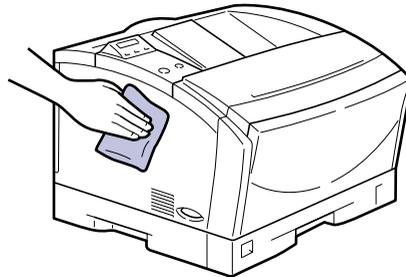
- Before turning the power off, make sure that there is no data being printed.
- If you are using the hard disk, follow the steps for the procedure described in “Turning the Printer On/Off” (See p.2-2).

- 2** Moisten a soft cloth with water or water-diluted neutral detergent. Squeeze the water or detergent out of the cloth. Wipe the printer with the cloth to remove stains.

When you use neutral detergent for cleaning, wipe off the neutral detergent remaining on the printer with a soft cloth moistened with water.



- 3** After removing stains, wipe the printer with a soft dry cloth to remove the remaining moisture.



- 4** Connect the power cord to the AC outlet after the body surface is dried completely.

Cleaning the Fixing Roller

Clean the fixing roller using the following procedure after replacing the toner cartridge. Also clean the fixing roller if black spots appear on the printed side or rear of the paper. Cleaning the fixing roller can prevent image deterioration. To clean the fixing roller, first print a cleaning page on the printer and use it to clean the roller.

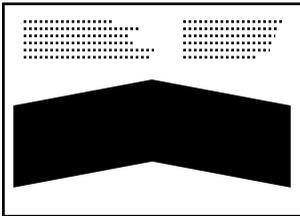


IMPORTANT

- Clean the fixing roller every time you replace the toner cartridge.

Printing a Cleaning Page

To clean the fixing roller, first print a cleaning page, as illustrated below, on an A4- or Letter-size sheet of paper.



IMPORTANT

- You cannot print a cleaning page on any media other than A4- or Letter-size paper. Be sure to prepare an A4- or Letter-size sheet of paper for printing.
- If A4- or Letter-size paper is not loaded in the paper cassette, load an A4- or Letter-size sheet of paper in landscape orientation.



1 Press [Go] to turn off the On Line indicator.

The printer goes off-line and is ready for settings to be made from the control panel.



2 Press [Menu] until you see <TEST MENU> in the top line.

TEST MENU



3 Press [Item] until <CLEANING PAGE> appears.



IMPORTANT

- If neither A4- nor Letter-size paper is loaded in any of the paper feeders, a message will appear on the display. In this case, load Letter- or A4-size paper in the multi-purpose tray.
- Specify the multi-purpose tray as a paper source. Load A4- or Letter-sized sheets of paper in the multi-purpose tray.



4 Press [Enter] to print the cleaning page

The printer prints the cleaning page.

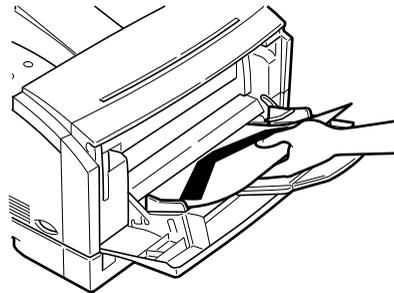
Cleaning the Fixing Roller

Clean the fixing roller using the printed cleaning page. When cleaning the fixing roller, use the multi-purpose tray to feed the cleaning page into the printer.



1 Press [Go] to turn off the On Line indicator, then press [Menu].

2 Load the cleaning page in the multi-purpose tray with its print side face up and the head of the arrow facing into the printer.



3 Press [Go] to feed the cleaning page through the printer to clean the fixing assembly.

The printer will slowly feed the cleaning page to start cleaning the fixing roller.



NOTE

- Normally, the cleaning of the fixing roller will require approximately five minutes.



4 Press [Go] to bring the printer back on-line.

The On Line indicator comes on and the printer is ready to use.

Cleaning the Paper Feed Roller and Separation Pad

Cleaning Procedure

■ To clean the paper feed roller of the multi-purpose tray

Paper may not be fed correctly when the paper feed roller is stained. When paper is not fed, or paper jams occur frequently in the paper feed tray, we recommend that you clean the paper feed roller. Contact your local dealer for details.

■ To clean the paper feed roller and the separation pad in the paper cassette and optional paper feed units

Paper may not be fed correctly when the paper feed roller or the separation pad are stained. If paper is not fed, or paper jams occur frequently in the paper feed tray, we recommend that you clean the paper feed roller and the separation pad. Clean them using the following procedure.



IMPORTANT

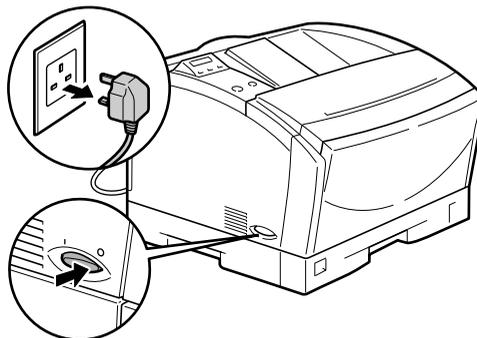
- If paper is not fed correctly even after the paper feed roller and the separation pad have been cleaned, they should be replaced. Contact your local dealer for details.



NOTE

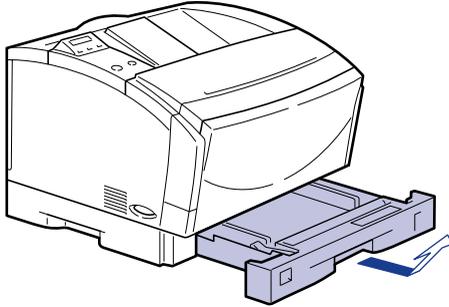
- Clean the paper feed roller and the separation pad in the optional paper feed units using the same procedure as that for the printer body.

- 1** Press the “○” side of the power switch to turn off the printer. Disconnect the power cord from the AC outlet.



3 IMPORTANT

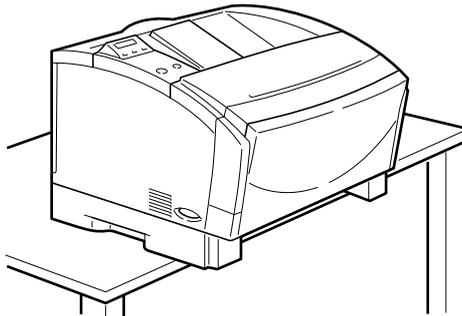
- Before turning the power off, make sure that there is no data being printed.
- If you have installed the optional hard disk, follow the procedure described in "Turning the Printer On/Off" (See p.2-2).

2 Slowly pull out the paper cassette until it stops. Then remove it from the printer body by lifting it slightly.**3** IMPORTANT

- The paper cassette cannot be pulled out horizontally. The cassette may be damaged if you try to force it out by pulling it straight out of the printer.

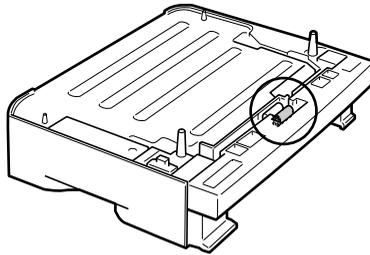
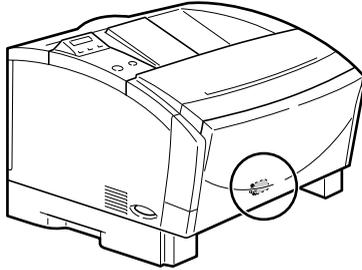
NOTE

- Remove the paper cassettes from all paper feed units when cleaning the paper feed rollers in the paper feed units.

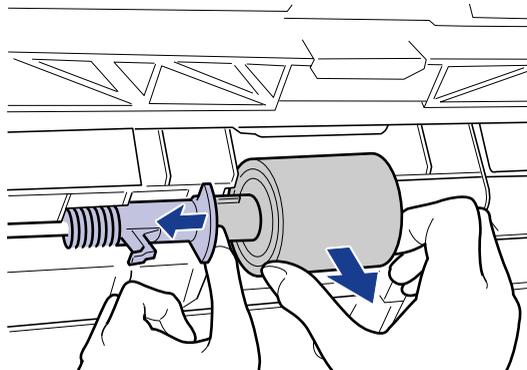
3 Disconnect the power cord and all interface cables.**4** Move the printer and the paper feed unit to a location where you can work easily.

 **IMPORTANT**

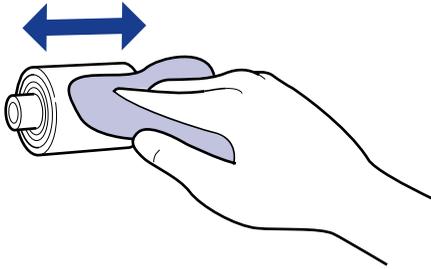
- See the Setup Guide for information about moving the printer.
- If you have installed more than one paper feed unit, clean all the units at one time. Carry each paper feed unit separately when moving them.
- The paper feed roller is fixed to the printer body and lower front of the paper feed unit.



5 Remove the paper feed roller by pushing the lever to the left.



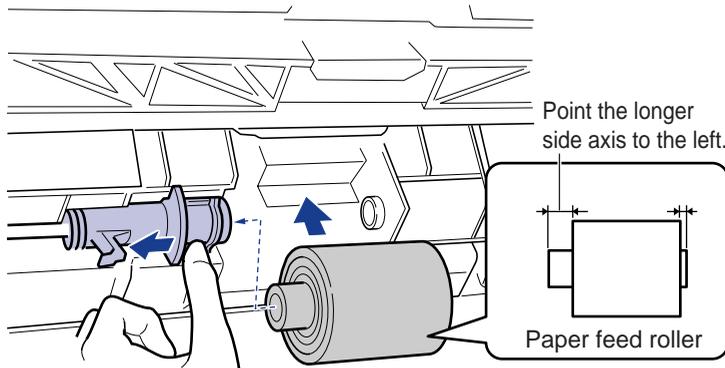
- 6** Remove any dirt from the paper feed roller using a cloth moistened with water and then wrung dry.



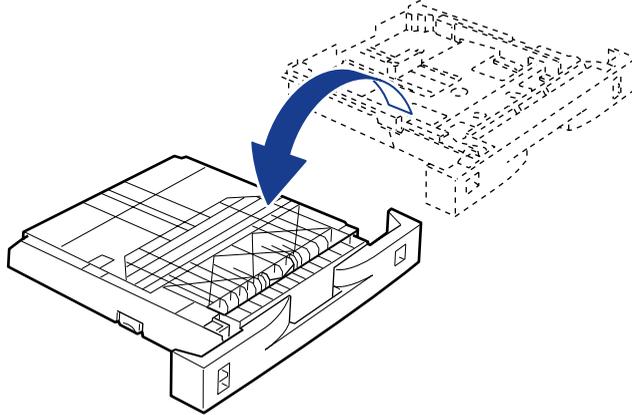
IMPORTANT

- Remove stains by wiping the paper feed roller in the direction indicated by the arrow.
- Use only a cloth moistened with water to clean the paper feed roller.
- Re-attach the paper feed roller after drying it completely.

- 7** Direct the longer side of the paper feed roller axis to the left. Slide the roller onto the shaft by pressing the lever to the left. Then return the lever to its original position.

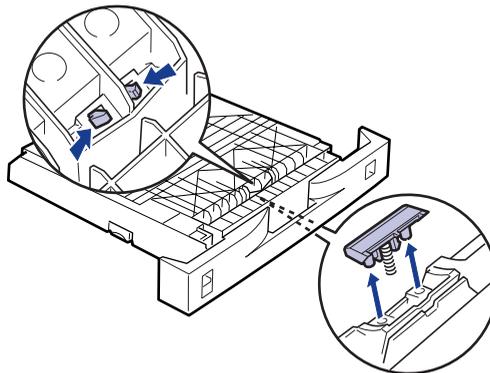


8 Turn over the paper cassette.

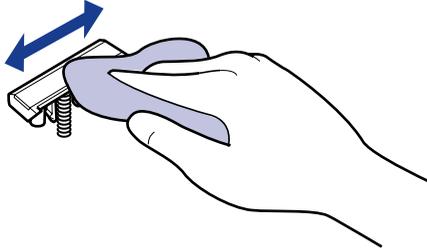


9 Pinch both tabs of the separation pad at the same time to remove the separation pad.

If you try to remove the separation pad without replacing the paper cassette, the pad may jump out. In this case, remove the separation pad by holding it to prevent it from jumping out.



- 10** Remove any dirt from the separation pad using a cloth moistened with water and then wrung dry.

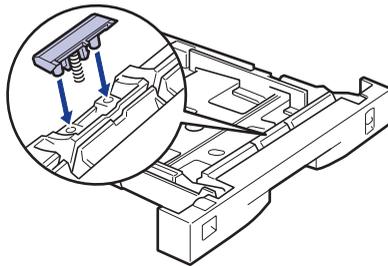


IMPORTANT

- Remove stains by wiping the separation pad in the direction indicated by the arrow.
- Use only a cloth moistened with water to clean the separation pad.
- Re-attach the separation pad after drying it completely.

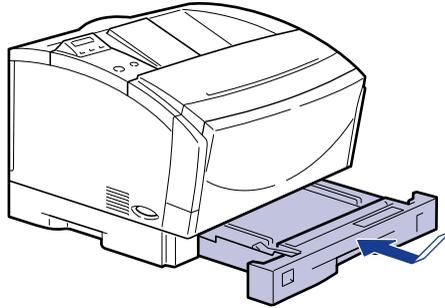
- 11** Re-attach the separation pad to the cassette with a spring, as shown in the illustration

Squeeze the spring until you hear a click.



12 Return the printer and the paper feed unit to the original installation location.

13 Insert the paper cassette at a slight angle and then slowly lower it to the horizontal position, as shown in the illustration, to insert it in the printer.



14 Reconnect the power cord and any interface cables.

15 Reconnect the power cord to the AC outlet.

Troubleshooting

9

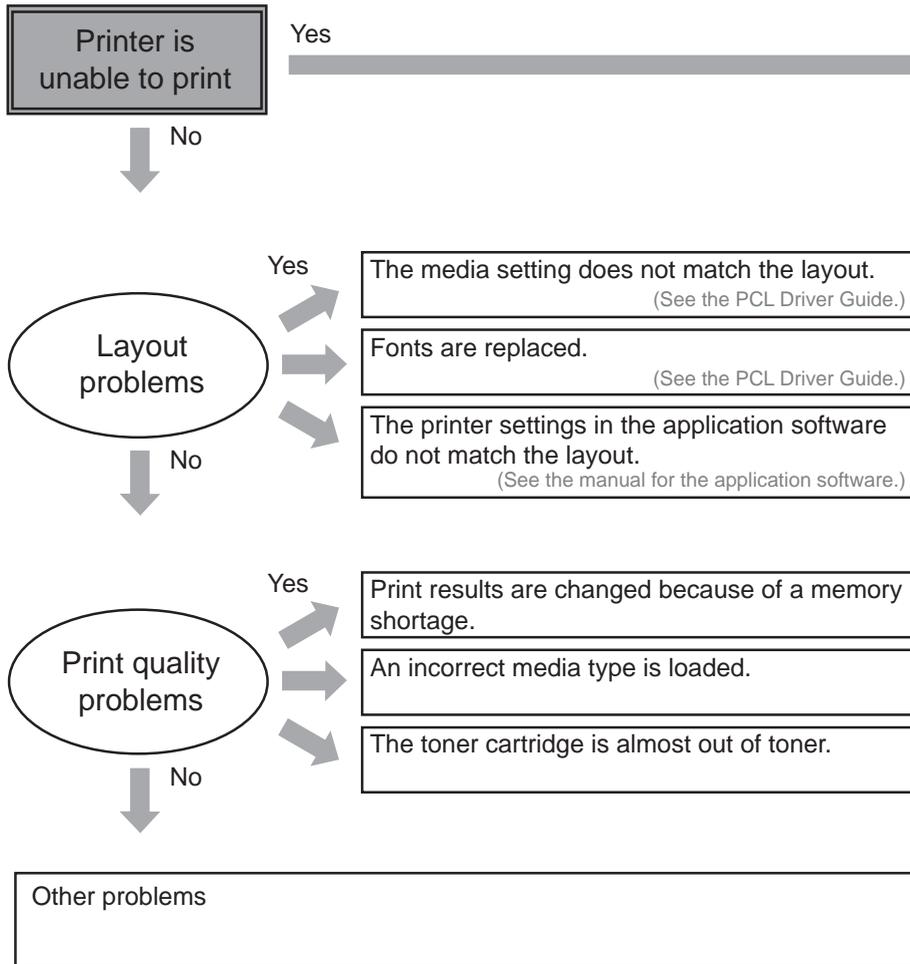
CHAPTER

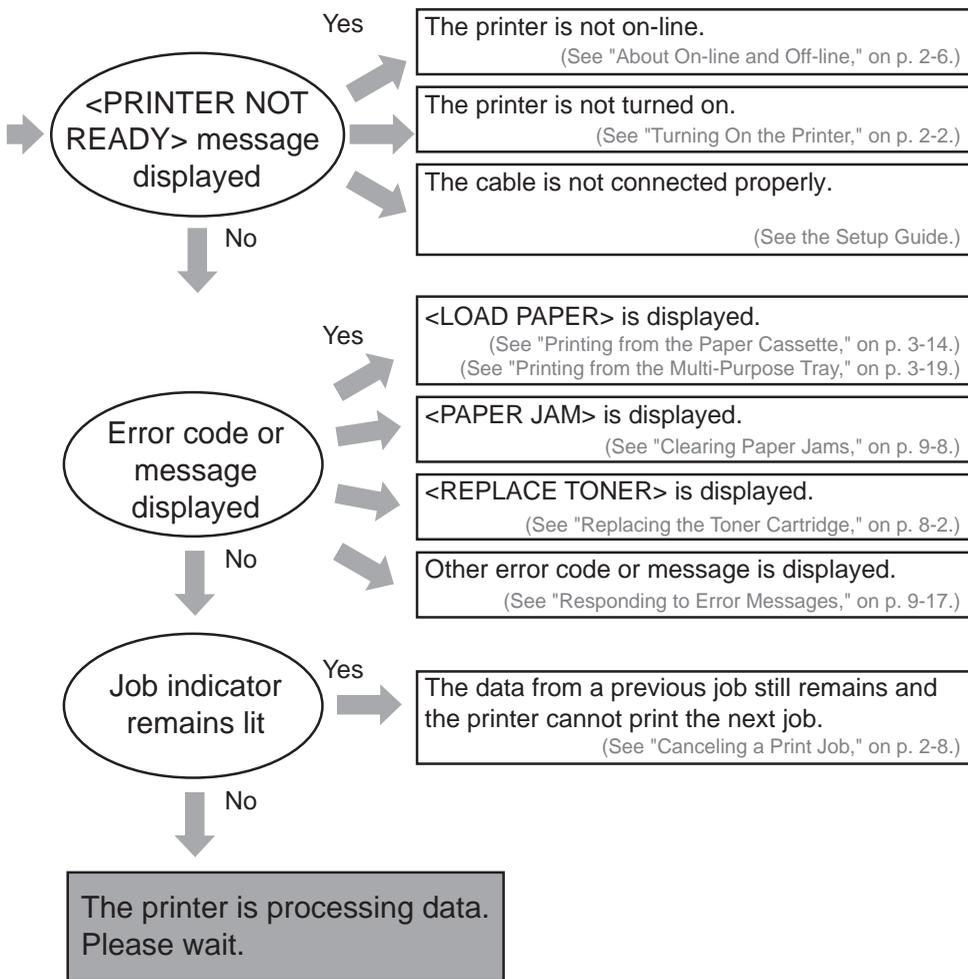
This chapter describes printing problems that can be solved by following a few simple procedures. Do not attempt to solve problems other than those described in this chapter. If you cannot solve a problem, call your local supplier.

When You Have Trouble Printing	9-2
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When You Have Trouble Printing

If your printer is unable to print or you have problems with the printer or print quality, use this map to find the appropriate page for help.





Problems and Solutions Without Messages

Use the following procedures to solve problems that do not cause the printer to display a message.

IMPORTANT

- Refer to “Responding to Error Codes and Messages” (See p.9-18) when messages are displayed.
- If symptoms not specified in this section occur, a problem persists even after following these procedures, or the cause cannot be figured out at all, contact your local supplier.

Printer Trouble

Indicators off and display blank.

Cause1 : Power switch is not turned on.

Remedy : Check the power switch to ensure the printer is turned on.

Cause2 : Power cord is not connected.

Remedy : Check the power cord and be sure it is connected at both ends.

Cause3 : No power at the AC outlet.

Remedy : Check the AC outlet. Consult an electrician or the local power company. If you are using a power strip, ensure power lead is connected at the source and turned on.

Printing does not start.

Cause1 : The printer is off-line.

Remedy : Press [Go] to bring the printer on-line.

Reference : “About On-line and Off-line” (See p.2-6)

Cause2 : The printer could not receive the data from the host computer because the printer took too long to process the current data in the printer.

Remedy : You may have to increase the I/O TIMEOUT setting or disable it in the PARALLEL MENU, USB MENU, or ETHERNET MENU.

Reference : "PARALLEL MENU" (See p.7-28)
"USB MENU" (See p.7-30)
"ETHERNET MENU" (See p.7-32)

Cause3 : The printer and host computer are not properly connected.

Remedy : Check the cable connection at the host computer and printer.

Reference : 'Connecting an Interface Cable' (See the Setup Guide.)

Cause4 : The printer is off-line

Remedy : Press [Go] to bring the printer on-line.

Reference : "About On-line and Off-line" (See p.2-6)

Cause5 : A failure occurred in the printer or an optional device.

Remedy : Take appropriate measures according to the message on the display.

Reference : "Responding to Error Codes and Messages" (See p.9-18)

Printing stops

Cause1 : Printing stops midway during a job and the printer will not print the remaining pages. The flow of data from the host computer has been interrupted for some reason and this has caused a timeout. If no data is received for a specified length of time, the job is terminated.

Remedy : You may have to increase the I/O TIMEOUT setting or disable it in the PARALLEL MENU, USB MENU, or ETHERNET MENU.

Reference : "PARALLEL MENU" (See p.7-28)
"USB MENU" (See p.7-30)
"ETHERNET MENU" (See p.7-32)

Paper excessively curled after coming out of the printer.

Cause : You may be using paper that curls too easily.

Remedy : Ensure the paper you are using meets the specifications described in "Printable Paper," on p.3-2. Remove the paper stack, turn it over, reload in the cassette and try again.

Print Problems

Printer not using the font you want.

Cause1 : You have specified a font that is not available

Remedy : Print a PCL or PS Font List and see if the font you specified is available.

Reference : "TEST MENU" (See p.7-10)

First page prints correctly in the font and format specified in the software application, but midway through the job the font and format changes.

Cause : The printer has initiated a job timeout. When a job timeout occurs, the downloaded fonts and formatting commands specified in the software application are lost, so printing after the job timeout is completed without the downloaded font and format.

Remedy : If the print job came via the parallel port or USB port, increase the I/O TIMEOUT setting or disable it on the PARALLEL MENU or USB MENU.

Reference : "PARALLEL MENU" (See p.7-28)
"USB MENU" (See p.7-30)

One edge of the document is cut off.

Cause1 : You are attempting to print something outside the printable area of the page.

Remedy : Use your software application to adjust the margins of the page. Check and ensure that your software application is not trying to print graphics or text outside the printable area.

Reference : See the PCL Driver Guide.

High jam rates, misfeeds, or multiple sheet feed errors.

Cause1 : You may be using unsuitable paper.

Remedy : Always use paper that is suitable for this printer.

Reference : "Paper Requirements" (See p.3-2)

Printing garbled text.

Cause1 : If unexpected letters and symbols are printed on the page, the operating mode setting may be incorrect.

Remedy : Make sure that the PERSONALITY item in the ETHERNET MENU, PARALLEL MENU or USB MENU is set to AUTO or the correct personality (PCL or PS) is selected, if the printer is dedicated to one personality.

Reference : "PARALLEL MENU" (See p.7-28)
"USB MENU" (See p.7-30)
"ETHERNET MENU" (See p.7-32)

Cause2 : The printer selection you made when you set up or installed your software application was incorrect.

Remedy : Make sure the correct printer is selected.

Reference : See the manual provided with your software.

Cause3 : If different portions of the text are garbled every time you print, the interface cable may be too long, and spurious noise is corrupting the data.

Remedy : The maximum length for the parallel cable is 3 meters. If your cable is longer than this, replace it with a shorter cable.

Cause4 : The printer is plugged into an outlet shared with another electrical device capable of generating noise, such as a photocopier, shredder or air conditioner.

Remedy : Plug the printer into a different outlet or consult a qualified technician to install a noise filter.

Printing overlap.

Cause : If another print job starts before the current job is finished, the flow of data from the host computer has been interrupted for some reason, and a job timeout has occurred. If data is not received for a specified length of time, the printer initiates a job timeout and terminates the job. After the job timeout, the printer automatically switches to the other interface when there is data waiting.

Remedy : You may have to increase the I/O TIMEOUT setting or disable it in the PARALLEL MENU or USB MENU.

Reference : "PARALLEL MENU" (See p.7-28)
"USB MENU" (See p.7-30)

Data originally printed as one page now printing as two or more pages.

Cause : If the time interval of the data sent by the software application to the printer is longer than the time interval before the printer regards a job as completed (the time to job timeout), the printer executes a job timeout, prints out only the data that has already been received, and terminates the job even if it is only partially completed. If the rest of the data is sent after the printer terminates the job, then the printer receives the data as a new job and starts printing on new pages. What was originally formatted to print on one page has been broken up into two or more pages.

Remedy : You may have to increase the I/O TIMEOUT setting or disable it in the PARALLEL MENU or USB MENU.

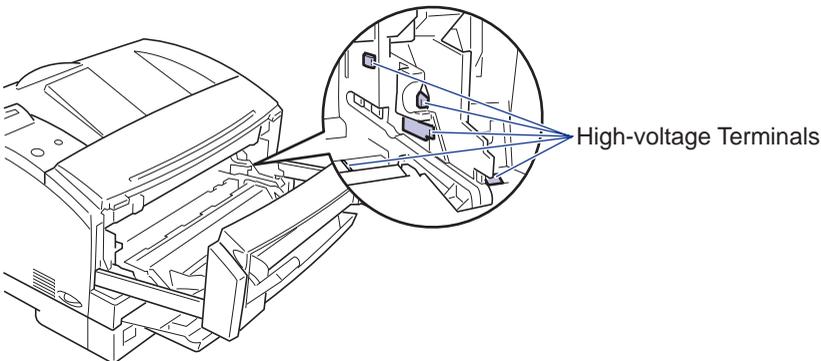
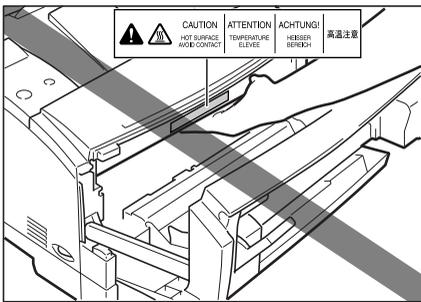
Reference : “PARALLEL MENU” (See p.7-28)
“USB MENU” (See p.7-30)

Clearing Paper Jams

When a paper jam occurs during printing due to some reason, a warning beep will sound and the error message <PAPER JAM> will appear on the display. When a paper jam occurs, remove the jammed paper in the printer following the steps of procedure described below and resume printing. If the message remains after removing the jammed paper according to the prescribed procedure, broken pieces of the jammed paper may still remain in the printer. In this case, re-check various sections of the printer to remove all pieces of the paper from inside the printer.

Procedure for Clearing Paper Jams

If a paper jam occurs, check the message appearing on the display first, reset the pressure releasing lever, then remove the jammed paper.



IMPORTANT

- The fixing unit may be hot during operation. Don't touch the fixing unit and its peripherals. It may cause personal injury, or burns.

- Never touch the high-voltage contact points inside the front cover. This could damage the printer.
- Remove the jammed paper with the power to the printer still on. If you turn the power off, the data being printing will be erased.
- When you have opened the front cover, take care not to touch the transfer roller located inside the cover and discharger.
- Do not touch the drum when removing paper.
- If you attempt to remove the jammed paper forcibly, the paper may be torn or the inside device may be damaged. Pull out the jammed paper in the correct direction according to the location at which the paper is jammed.
- When the jammed paper has torn, find the scraps pieces of the paper remaining inside the printer to remove them.

1 Check all the messages appearing on the display.

Check all the messages appearing on the display.

The error messages and the locations are shown one by one on the display. Check all of them. The messages will disappear when you open front the covers. It is recommended to note down the messages.

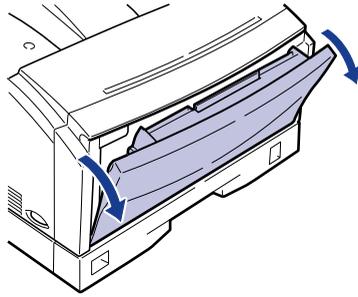
CAUTION

- **The message indicates the location at which a paper jam has occurred. The following types of messages are shown on the display. When two or more messages appear on the display, note down all of them and check them one by one in sequence.**

Display message	Location of a paper jam	Checking sequence
<PAPER JAM>	Front cover area	1
<CHECK OUTPUT AREA>	Paper delivery area	2
<CHECK INPUT AREA>	Paper feed area	3

2 Grasp the tabs on either side of the multi-purpose tray and slowly pull it open.

In the paper was fed from the multi-purpose tray, proceed to the next step

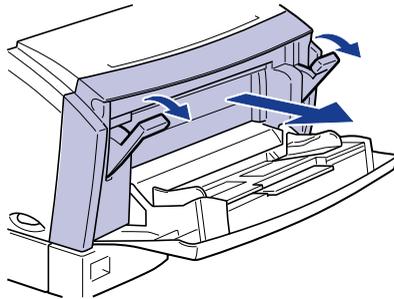


IMPORTANT

- Be sure to support the multi-purpose tray with both hands when opening it.

3 Remove the paper jammed in the multi-purpose tray.

4 Pull the two grey release levers inside the multi-purpose tray area towards you, then pull the front cover forwards until it stops.



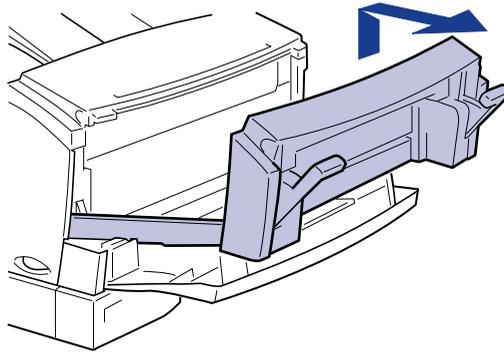
IMPORTANT

- Place the front cover in a safe place where it will not be damaged, or cause an obstruction.

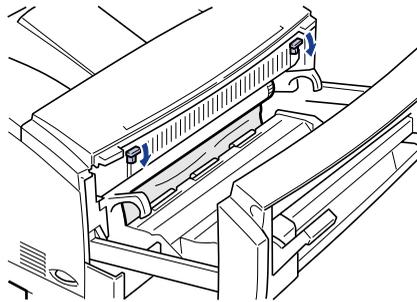


NOTE

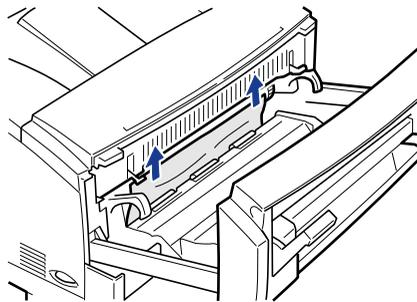
- If you have trouble removing the front cover, lift it slightly. This will enable you to remove the front cover.

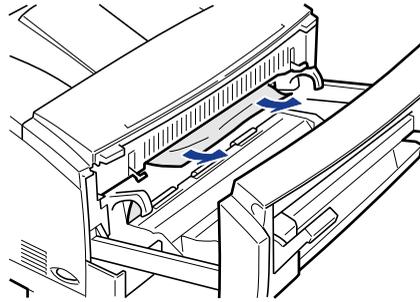


- 5** Press down the right and left green pressure release levers to release the pressure applied by the fixing unit.



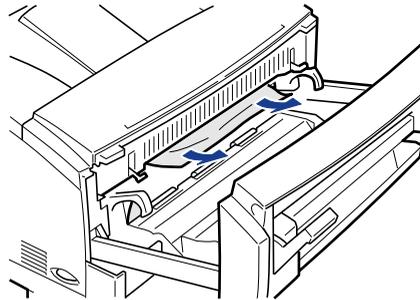
- 6** When the message <PAPER JAM> appears on the display, gently pull out the paper jammed in the front cover using both hands.



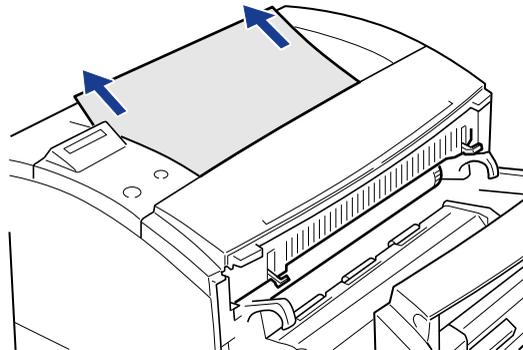


7 When **<CHECK OUTPUT AREA>** is displayed, pull out the jammed paper with both hands as shown below.

If you can see the jammed paper is inside the front cover, pull it out with both hands.

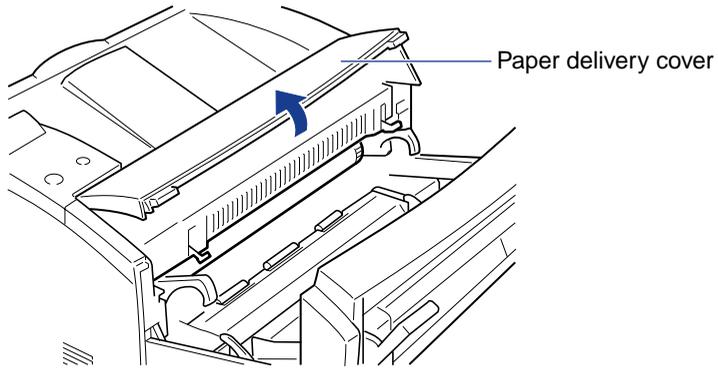


If you cannot see the jammed paper inside the front cover, pull it out with both hands from the paper delivery tray.

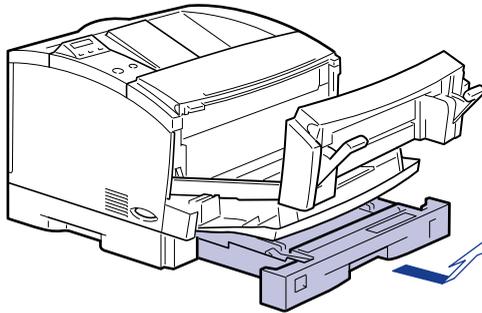


NOTE

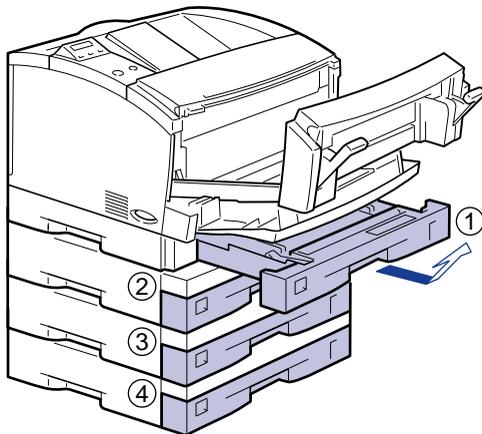
- Open the paper delivery cover to make sure there are no scraps of paper left inside the printer after you have removed the jammed paper.



8 When the message <CHECK INPUT AREA> appears on the display, pull out all the paper cassettes by lifting them slightly.



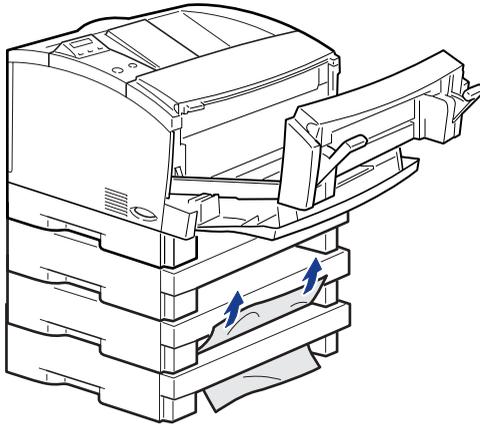
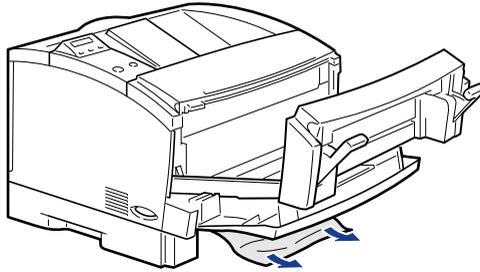
When an optional paper feed unit is attached to your printer, pull out all the paper cassettes starting from the top cassette.



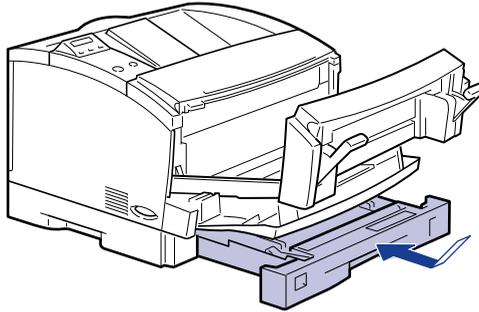
IMPORTANT

- Pull out the cassettes starting from the top one. If you pull out them starting from the bottom one, the jammed paper may tear leading to more paper jams.
- Paper cassettes cannot be pulled out horizontally. If you try to force a paper cassette out horizontally, it may be damaged.

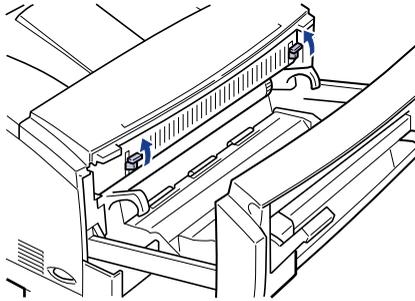
9 Pull out the paper jammed in the front cover using both hands.



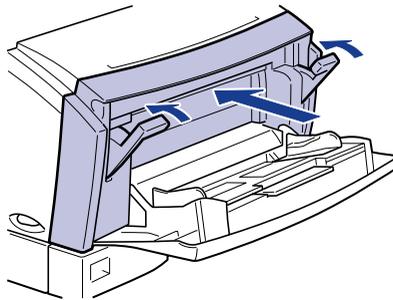
- 10** Load the paper in the paper cassette and re-install the paper cassette in the printer.



- 11** Raise the right and left pressure release levers to lock them in place.



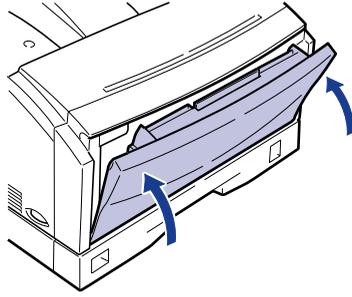
- 12** Close the front cover and raise the right and left release levers to lock them in place.



IMPORTANT

- Do not leave the front cover open for a long time after installing a toner cartridge.

13 Close the multi-purpose tray.



Responding to Error Codes and Messages

If printing is disabled during a print job for some reason, a buzzer will sound, the alarm indicator will light up and an error code(s) will appear on the display. In addition, for any phenomenon that does not affect printing function of the printer but requires some measure to be taken, a warning message will appear on the display. When any of these messages appear on the display, follow one of the remedies listed to respond to the message.

NOTE

- When two or more problems that are indicated by warning messages occur simultaneously, the corresponding messages will appear alternately.
- When two or more error messages appear on the display simultaneously, warning messages will not appear there.
- For messages attached with <Error Skip>, the printer will be able to continue printing by “skipping errors” when you press [Go]. It should be remembered, however, that some pieces of print data may be omitted or may not be printed correctly. If you want to stop the procedure, perform software reset and remove the cause. Then press [Go] to start printing again.

FLASH OVERFLOW

Cause1 : A memory overflow has occurred in the optional Flash ROM.

Remedy : Format the Flash ROM or delete font and macro data to create more space.

Cause2 : The printer has received more font and macro data than it can hold in the available memory of the Flash ROM. The printer goes off-line.

Remedy : Press [Go] to bring the printer back on-line.

FLASH ERROR

Cause : An error has occurred when trying to format, or read or write data to the optional Flash ROM.

Remedy : Replace the Flash ROM.

FLASH FORMAT RESTART

Cause : The optional Flash ROM has been formatted using the FORMAT FLASH item. The printer will restart.

Remedy : No action required.

FLASH FORMATTING

Cause : The optional Flash ROM is being formatted.

Remedy : No action required.

E001 ERROR CALL FOR SERVICE

Cause : A fuser overheating error.

Remedy : Turn the printer off, wait 15 minutes and then turn the printer back on. If this error persists, turn the printer off, unplug power cord from the AC outlet and call for service.

E110-ERROR CALL FOR SERVICE

Cause : A scanner motor or laser unit error.

Remedy : If this error persists, call for service.

E805-ERROR CALL FOR SERVICE

Cause : A fan failure error.

Remedy1 : If this error persists, call for service.

E677/6F-61 CALL FOR SERVICE

Cause : An internal ROM check error.

Remedy : If this error persists, call for service.

E677/6F-7A CALL FOR SERVICE

Cause : An SRAM error in the AIR chip.

Remedy : If this error persists, call for service.

CASSETTE1 MISSING

Cause : The universal cassette is not installed in the printer or is not correctly positioned.

Remedy : Install the paper cassette in the printer. If the paper cassette is installed in the printer, remove it, insert it again and make sure it is securely in position.

Reference : "Printing from the Paper Cassette" (See p.3-12)

CASSETTE2 MISSING

(If installed.)

Cause : The cassette for the optional paper feed unit is not installed in the printer or is not correctly positioned.

Remedy : Install the paper cassette in the printer. If the paper cassette is installed in the printer, remove it, insert it again and make sure it is securely in position.

Reference : "Printing from the Paper Cassette" (See p.3-12)

CASSETTE3 MISSING

(If installed.)

Cause : The cassette for the optional paper feed unit is not installed in the printer or is not correctly positioned.

Remedy : Install the paper cassette in the printer. If the paper cassette is installed in the printer, remove it, insert it again and make sure it is securely in position.

Reference : "Printing from the Paper Cassette" (See p.3-12)

CASSETTE4 MISSING

(If installed.)

Cause : The cassette for the optional paper feed unit is not installed in the printer or is not correctly positioned.

Remedy : Install the paper cassette in the printer. If the paper cassette is installed in the printer, remove it, insert it again and make sure it is securely in position.

Reference : "Printing from the Paper Cassette" (See p.3-12)

CLEANING PAGE

Cause : The fixing roller needs to be cleaned.

Remedy : Follow the instructions to clean the fixing assembly using the operation panel menus.

Reference : "Cleaning the Fixing Roller" (See p.8-22)

<SIZE> IN <TRAY>

Cause : The indicated paper size needs to be loaded in the indicated paper tray.

Remedy : The specified paper source must be loaded with the requested paper size. To continue the print job, you may have to press [Go]. If a paper source runs out of paper during printing, reloading the paper source will allow the printer to continue printing. For manual feed, you need to press [Go] to continue printing.

	Tray	Size
Load	CASSETTE1	LETTER
	CASSETTE2	LEGAL
	CASSETTE3	A4
	CASSETTE4	A5
	MPT	EXEC
	ANY	COM10
		MONARCH
		DL
		C5
		B5-JIS
	CUSTOM	

CASSETTE1	The internal 250-sheet Universal Cassette UC-65
CASSETTE2	The optional 250-sheet Canon Paper Feed Unit PF-65
CASSETTE3	The optional 250-sheet Canon Paper Feed Unit PF-65
CASSETTE4	The optional 250-sheet Canon Paper Feed Unit PF-65
MPT	The multi-purpose tray on the printer
ANY TRAY	Any tray that can support Letter-, Legal-, A4-, A5-, Executive-, or B5-JIS-size paper.

LOAD <SIZE> IN MANUAL

Cause1 : The specified paper needs to be loaded in the multi-purpose tray.

Remedy : Load the multi-purpose tray with the specified paper. You must press [Go] to continue printing.

Reference : "Printing from the Multi-Purpose Tray" (See p.3-17)

MEM ALLOC ERROR

Cause : There is not enough memory available to process the data and print the page. If AUTOCONT is ON (CONFIG MENU), the print job will resume after 10 seconds.

Remedy : If AUTOCONT is OFF, you must press [Go] to resume printing. Check the printed page to ensure that it is complete.

Reference : "CONFIG MENU" (See p.7-22)

MEMORY OVERFLOW

Cause : A memory overflow has occurred.

Remedy : The printer has received more data than it can hold in the available memory on the printer. This can occur if too many soft fonts, macros or complex graphics are sent to the printer. If AUTOCONT is ON (CONFIG MENU), the print job will resume after 10 seconds. If AUTOCONT is OFF, you must press Go and the job will continue printing, although data may be lost. Simplify the print job by deleting unnecessary fonts or macros from the printer memory.

MRT COMPRESSION

Cause : The printer is using MRT Compression, which can result in a reduction in print quality (loss compression).

Remedy : No action required.

RESTORING DEFAULTS

Cause : This message is displayed when <RESET=MENU> is selected in the RESET MENU.

Remedy : No action required.

TONER CART MISSING

Cause : No toner cartridge is installed in the printer, or the toner cartridge is not installed correctly.

Remedy : Replace the toner cartridge or, if a toner cartridge is installed, remove it and insert it again. Ensure the toner cartridge is positioned correctly.

OPTION RAM ERROR

Cause : This is an error caused by a RAM (DIMM) installed in the printer.

Remedy : An optional RAM has failed its startup diagnostic check. The optional RAM must be reinstalled or replaced.

PAPER JAM

Cause : A paper jam has occurred in the printer.

Remedy : Remove the jammed paper. The top cover must be opened and closed to resume printing. Press [Go] to bring the printer back on-line.

Reference : "Clearing Paper Jams" (See p.9-9)

PAGES:####

Cause : This message is displayed when SHOW PAGE COUNT is selected in the TEST MENU, where #### is the total number of pages that have been printed by the printer.

Remedy : No action required.

PAUSED

Cause : The printer is off-line.

Remedy : Press [Go] to bring the printer on-line.

PRINTER OPEN

Cause : The printer cover is open.

Remedy : Close the printer front cover. Press [Go] to bring the printer back on-line.

PRINTING...

Cause : The printer is processing a print job.
You will see this message if you try to take the printer off-line by pressing [Go] during printing. This message is also displayed when you are printing one of the internal demonstration or test pages.

Remedy : No action required. Wait for printing to finish.

KEY NOT VALID

Cause : This message is displayed when a button that is not enabled in the current function is pressed.

Remedy : Press the correct key to complete the current function.

WARMING UP..

Cause : The printer is warming up.

Remedy : Wait until the printer has warmed up and displays <READY>.

WRONG PAPER SIZE

Cause : A paper size mismatch has occurred. More than one paper size has been found in the same tray.

Remedy : Inspect the trays for mismatched paper and correct.

PARALLEL INTERFACE ERROR

Cause1 : The parallel port is not communicating with the controller.

Remedy : Restart the printer. If this error persists, call for service.

USB INTERFACE ERROR

Cause : The USB port is not communicating with the controller.

Remedy1 : Restart the printer. If this error persists, call for service.

PS OPTION ERROR

Cause : The optional PS ROM DIMM has failed its startup test.

Remedy : Replace the ROM DIMM.

+FORMAT FLASH - IGNORE FLASH

Cause1 : This message appears when the <FORMAT FLASH> item is selected to format the optional Flash ROM. It may also appear when a Flash ROM with an unsupported format is installed and when the power is turned on.

Remedy : Select + (press [Value]) to format the Flash ROM. Select - (press [Shift] and [Value]) to cancel the operation.

+REALLY FORMAT - IGNORE FLASH

Cause : This message appears asking you to confirm that you want to format the optional Flash ROM if <+FORMAT FLASH> is selected in the message above.

Remedy : Select + (press [Value]) to begin formatting the Flash ROM. Select - (press [Shift] and [Value]) to cancel the operation.

Other Print Problems

Correcting Poor Print Quality

Printed text faded or streaked with white.

Cause : The level of toner remaining in the toner cartridge may be low, or the toner is not evenly distributed inside the cartridge.

Remedy : Remove the cartridge, rock it gently 5 or 6 times and try to print again. If this does not solve the problem, replace the toner cartridge. Even if this solves the problem, you should have a new toner cartridge on hand to replace the old cartridge when it runs out of toner.

Reference : “Replacing the Toner Cartridge” (See p.8-2)

Printed pages are dirty or have white specks.

Cause1 : The fixing roller inside the fixing assembly has become dirty with toner dust.

Remedy : Clean the fixing assembly inside the printer.

Reference : “Cleaning the Fixing Roller” (See p.8-23)

Cause2 : The inside of the printer has become dirty with toner residue.

Remedy : Clean the transfer guide area with a clean cloth. If the problem persists, repeat the cleaning procedure above a few times.

Reference : “Cleaning the Paper Feed Roller and Separation Pad” (See p.8-25)

Text is too light or too dark.

Cause1 : The printed image on your page is too light or too dark.

Remedy : Adjust the print density.

Reference : “Adjusting the Print Density” (See p.8-18)

Cause2 : Economy Mode is selected in CONFIG MENU.

Remedy : Set Economy Mode to OFF in CONFIG MENU.

Reference : “CONFIG MENU” (See p.7-22)

Printing is uneven

Cause1 : The level of toner remaining in the toner cartridge may be low.

Remedy : Remove the cartridge, rock it gently 5 or 6 times and then insert it again. If this does not solve the problem, replace the toner cartridge.

Reference : "Replacing the Toner Cartridge" (See p.8-2)

Cause2 : The toner cartridge is old or damaged.

Remedy : Replace the toner cartridge.

Reference : "Replacing the Toner Cartridge" (See p.8-2)

Cause3 : Paper is wet or dry.

Remedy : Replace the paper with paper that is suitable for the printer.

Reference : "Paper Requirements" (See p.3-2)

Black spots on the top and back of the printed pages

Cause : The fixing roller inside the fixing assembly unit may be dirty.

Remedy : Clean the fixing roller.

Reference : "Cleaning the Fixing Roller" (See p.8-22)

Black stripes appear on multiple sheets in sequence

Cause : The life of the toner cartridge is expired.

Remedy : Replace the toner cartridge.

Reference : "Replacing the Toner Cartridge" (See p.8-2)

This chapter summarizes and contains the index and glossary for this manual, and the specifications of the printer.

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Checking the Printer Operation

You can use the test print to check the configuration of the printer, and the font list to check the fonts installed on the printer

Configuration Page

Follow the procedure below to print the test print (Configuration Page.) A description of the information included in the test print is provided on the following pages.



1 Press [Go] to take the printer off-line.

The On Line indicator should go off. <PAUSED> will appear in the display.



2 Press [Menu] until you see <TEST MENU> in the top line.



3 Press [Item] until you see <TEST PRINT> in the bottom line.

Enter/Cancel



4 Press [Enter] to start printing the test print.

Test Print (Configuration Page) Sample

Canon Inc., LBP-2000 Printer Configuration Page

Canon

- ① **TEST MENU**
SHOW PAGE COUNT
TEST PRINT
PRINT PS FONTS
PRINT PCL FONTS
PRINT JOB LOG
CONTINUOUS TEST
PRINT EN CONFIG
CLEANING PAGE
- ② **PCL MENU**
RESOLUTION = 600
COPIES = 1
PAGESIZE = LETTER
ORIENTATION = PORTRAIT
FORM = 60LINES
FNTRSRC = INTERNAL
FONTNUM = 0
PT.SIZE = 12.00
PITCH = 10.00
SYMSET = ROMAN-8
AUTO CR = OFF
WIDE A4 = OFF
OVERRIDE = OFF
- ③ **PS MENU**
RESOLUTION = 600
COPIES = 1
PRINT ERRS = OFF
- ④ **FEEDER MENU**
FEED = CASSETTE1
TRAY SWITCH = OFF
MANUAL = OFF
MPT SIZE = A4
- ⑤ **CONFIG MENU**
JAM RECOVERY = OFF
AUTOCONT = OFF
DENSITY = 7
PWRSV = 1 HR
ECONOMY MODE = OFF
REFINE = ON
- ⑥ **SHUTDOWN MENU**
SHUTDOWN
- ⑦ **PARALLEL MENU**
PERSONALITY = AUTO
BIDIRECTION = ON
I/O TIMEOUT = 15
- ⑧ **USB MENU**
PERSONALITY = AUTO
I/O TIMEOUT = 15
- ⑨ **ETHERNET MENU**
PERSONALITY = AUTO
I/O TIMEOUT = 15
IP ADDRESS = 150.61.52.184
SUBNET MASK = 255.255.255.0
GATEWAY ADDRESS = 150.61.52.1
MAC ADDRESS = 00:00:85:14:C0:89
- ⑩ **LANGUAGE MENU**
LANG = ENGLISH
- ⑪ **RESET MENU**
RESET = MENU
RESET = FONTS
RESET = FORMS
RESET = STORED JOBS
RESET = JOB LOG
RESET = ERROR LOG
RESET = JAM LOG
- ⑫ **JOB LOG MENU**
AUTO PRINT LOG PER 50 JOBS = NO
JOB LOG FULL = STOP
GMT DIFFERENTIAL TIME = 0.0
DAYLIGHT SAVING = OFF
- ⑬ **JOB CONTROL MENU**
JOB SECURING TIME = 2 HR
PRINT W/ USER ID & PASSWORD = ON
- ⑭ **INSTALLED OPTIONS**
PS
ETHERNET
DISK
FLASH

TOTAL MEMORY = 72 MB
DISK SIZE = 9585 MB
DISK FREESPACE = 9581 MB
- ⑮ **PRINTER DETAILS**
2001/07/04 14:37:39
CODE LEVELS
CTL V1.21 US 2001/06/13
Engine Version 1.25
Serial Number 1000000104
PCL PeerlessPrint5-E PP5E V1.5.0 2001/04/0
PCLXL PeerlessPrintXL PPXL V1.2.0 2001/04
PS 1.15
EN 1.0083
PSIO 3.03 04/01/97
PAGE COUNT = 99
SMALL COUNT = 99
LARGE COUNT = 0

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Adobe, PostScript, the Adobe logo and the PostScript logo are the trademarks
of Adobe Systems Incorporated.

The Configuration Page shown here is for a printer with the optional network card (Canon Ethernet Board EB-65), hard disk (Canon Hard Disk HD-65), PS module (Canon Adobe PostScript 3 Module A-65), Flash ROM (Canon Flash ROM Module FR-65), and additional RAM memory installed.

① TEST MENU

Displays the test menu options. (See “TEST MENU,” on p.7-10)

② PCL MENU

Shows the PCL print job settings, as determined by the PCL MENU options. (See “PCL MENU,” on p.7-12)

③ PS MENU (Only displayed if the optional Canon Adobe PostScript 3 Module A-65 is installed)

Displays the PostScript print job settings, as determined by the PS MENU options. (See “PS MENU,” on p.7-17)

④ FEEDER MENU

Displays the settings for the paper feed options for the printer, as determined by the FEEDER MENU options. (See “FEEDER MENU,” on p.7-19)

⑤ CONFIG MENU

Displays the printer configuration as determined by the CONFIG MENU options. (See “CONFIG MENU,” on p.7-22)

⑥ SHUTDOWN MENU

Displays the menu option used to shutdown the printer, before turning it off. (See “SHUTDOWN MENU,” on p.7-8)

⑦ PARALLEL MENU

Displays the parallel interface settings, as determined by the PARALLEL MENU options. If the optional PostScript module is installed, you will see the settings for automatic personality switching on the parallel port. (See “PARALLEL MENU,” on p.7-28)

⑧ USB MENU

Displays the USB interface settings, as determined by the USB MENU options. If the optional PostScript module is installed, you will see the settings for automatic personality switching on the USB port. (See “USB MENU,” on p.7-30)

⑨ ETHERNET MENU (Only displayed if the optional Canon Ethernet Board EB-65 is installed.)

Displays the Ethernet interface settings, as determined by the ETHERNET MENU options. If the optional PostScript module is installed, you will see the settings for automatic personality switching on the network card. (See “ETHERNET MENU,” on p.7-32)

⑩ LANGUAGE MENU

Displays the language setting. (See “LANGUAGE MENU,” on p.7-35)

⑪ RESET MENU

Displays the reset menu options. (See “RESET MENU,” on p.7-36)

⑫ JOB LOG MENU

Displays the job log settings, as determined by the JOB LOG MENU options. (See “JOB LOG MENU,” on p.7-37)

⑬ JOB CONTROL MENU

Displays the job control settings, as determined by the JOB CONTROL MENU options. (See “JOB CONTROL MENU,” on p.7-27)

⑭ INSTALLED OPTIONS

Displays a list of the options installed on the printer and the total memory.

⑮ PRINTER DETAILS

Displays the printer ROM DIMM version, version numbers of any installed options, and the page counts.

Font List

Follow the procedure below to print the font list. A description of the information included in the font list is provided on the following pages. Samples of the standard typefaces included with the printer are shown in "Typeface Samples" (See p.10-9)



1 Press [Go] to take the printer off-line.

The On Line indicator should go off. <PAUSED> will appear in the display.



2 Press [Menu] until you see <TEST MENU> in the top line.



3 Press [Item] until you see <PRINT PCL FONTS> in the bottom line.



4 Press [Enter] to start printing the test page.

It may take a few minutes for the font list to print.

PCL Font List Sample

Font List										
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪
Font #	Font ID	Symbol Set	Fix /PS	Pitch (cpi)	Point Size	Style	Stroke Weight	Name or Typeface	Default Orient	Print Sample & Escape Sequence
<u>PERMANENT* SOFT FONTS</u>										
<u>DISK FONTS</u>										
<u>FLASH FONTS</u>										
<u>INTERNAL FONTS</u>										
1000	ROMAN-8	F	Scale			Upright	Medium	Courier	Port	ascDEfghijjAA°ÇÑ;¿EŠê#\$\$@[]^`{|}~123 <esc>(BU<esc>(s0p_h0s0b4099T
1001	ROMAN-8	P		Scale		Upright	Medium	CG Times	Port	ascDEfghijjAA°ÇÑ;¿EŠê#\$\$@[]^`{|}~123 <esc>(BU<esc>(s1p_v0s0b4101T
1002	ROMAN-8	P		Scale		Upright	Bold	CG Times	Bd Port	ascDEfghijjAA°ÇÑ;¿EŠê#\$\$@[]^`{|}~123 <esc>(BU<esc>(s1p_v0s3b4101T
1003	ROMAN-8	P		Scale		Italic	Medium	CG Times	It Port	ascDEfghijjAA°ÇÑ;¿EŠê#\$\$@[]^`{|}~123 <esc>(BU<esc>(s1p_v1s0b4101T
1004	ROMAN-8	P		Scale		Italic	Bold	CG Times	BdIt Port	ascDEfghijjAA°ÇÑ;¿EŠê#\$\$@[]^`{|}~123 <esc>(BU<esc>(s1p_v1s3b4101T
1005	ROMAN-8	P		Scale		Upright	Medium	CG Omega	Port	ascDEfghijjAA°ÇÑ;¿EŠê#\$\$@[]^`{|}~123 <esc>(BU<esc>(s1p_v0s0b4113T
1006	ROMAN-8	P		Scale		Upright	Bold	CG Omega	Bd Port	ascDEfghijjAA°ÇÑ;¿EŠê#\$\$@[]^`{|}~123 <esc>(BU<esc>(s1p_v0s3b4113T
1007	ROMAN-8	P		Scale		Italic	Medium	CG Omega	It Port	ascDEfghijjAA°ÇÑ;¿EŠê#\$\$@[]^`{|}~123 <esc>(BU<esc>(s1p_v1s0b4113T
1008	ROMAN-8	P		Scale		Italic	Bold	CG Omega	BdIt Port	ascDEfghijjAA°ÇÑ;¿EŠê#\$\$@[]^`{|}~123 <esc>(BU<esc>(s1p_v1s3b4113T
1009	ROMAN-8	P		Scale		Italic	Medium	Coronet	Port	ascDEfghijjAA°ÇÑ;¿EŠê#\$\$@[]^`{|}~123 <esc>(BU<esc>(s1p_v1s0b4116T
1010	ROMAN-8	P		Scale		Cond	Bold	Clarendon	CdBd Port	ascDEfghijjAA°ÇÑ;¿EŠê#\$\$@[]^`{|}~123 <esc>(BU<esc>(s1p_v4s3b4140T
1011	ROMAN-8	P		Scale		Upright	Medium	Univers	Md Port	ascDEfghijjAA°ÇÑ;¿EŠê#\$\$@[]^`{|}~12 <esc>(BU<esc>(s1p_v0s0b4148T
1012	ROMAN-8	P		Scale		Upright	Bold	Univers	Bd Port	ascDEfghijjAA°ÇÑ;¿EŠê#\$\$@[]^`{|}~12 <esc>(BU<esc>(s1p_v0s3b4148T
1013	ROMAN-8	P		Scale		Italic	Medium	Univers	MdIt Port	ascDEfghijjAA°ÇÑ;¿EŠê#\$\$@[]^`{|}~12 <esc>(BU<esc>(s1p_v1s0b4148T
1014	ROMAN-8	P		Scale		Italic	Bold	Univers	BdIt Port	ascDEfghijjAA°ÇÑ;¿EŠê#\$\$@[]^`{|}~12 <esc>(BU<esc>(s1p_v1s3b4148T
1015	ROMAN-8	P		Scale		Cond	Medium	Univers	CdMd Port	ascDEfghijjAA°ÇÑ;¿EŠê#\$\$@[]^`{|}~123 <esc>(BU<esc>(s1p_v4s0b4148T

The Font List includes the following information.

① **Font #**

This represents the font number used to select the font from the control panel. (See “FONTNUM,” on p.7-14) The letter prefix of the number indicates the source of the font.

I: Internal (resident) font

S: Permanent soft font

D: Disk fonts

F: Flash fonts

② **Font ID**

The number allocated by the user to soft fonts downloaded to the printer.

③ **Symbol Set**

The name of the symbol set used by the font. (See “Symbol Sets Supported,” on p.10-18)

④ **Fix/PS**

Indicates whether the font is a fixed, non-proportional font (F) or a proportional font (P).

⑤ **Pitch (cpi)**

The pitch and point size of the font. “Scale” is used to indicate a scalable font.

⑥ **Point Size**

The measured vertical distance in points (72 points=1 inch) from the top of the capital letter to the tail of the letter “y.”

⑦ **Style**

Upright (straight), italic (slanted), condensed (compressed), or expanded (loose) characters.

⑧ **Stroke Weight**

The stroke weight (thickness) of the characters in the font.

⑨ **Name or Typeface**

The name of the typeface.

⑩ **Default Orient**

The orientation of the print. The default orientation for all fonts is portrait.

⑪ **Print Sample & Escape Sequence**

A print sample of the font and the PCL commands used to select the font.

Typeface Samples

The font lists printed from the TEST MENU are a comprehensive listing of all fonts currently available. The listing contains the names and print samples of the fonts stored on the printer.

Scalable Fonts (PCL)

Courier

abcDEfghijjÃÂ°ÇÑî¿£\$ê#\$\$@[]^'_{|}~123
<esc>(8U<esc>(s0p_h0s0b4099T

CG Times

abcDEfghijjÃÂ°ÇÑî¿£\$ê#\$\$@[]^'_{|}~123
<esc>(8U<esc>(s1p_v0s0b4101T

CG Times Bold

abcDEfghijjÃÂ°ÇÑî¿£\$ê#\$\$@[]^'_{|}~123
<esc>(8U<esc>(s1p_v0s3b4101T

CG Times Italic

abcDEfghijjÃÂ°ÇÑî¿£\$ê#\$\$@[]^'_{|}~123
<esc>(8U<esc>(s1p_v1s0b4101T

CG Times Bold Italic

abcDEfghijjÃÂ°ÇÑî¿£\$ê#\$\$@[]^'_{|}~123
<esc>(8U<esc>(s1p_v1s3b4101T

CG Omega

abcDEfghijjÃÂ°ÇÑî¿£\$ê#\$\$@[]^'_{|}~123
<esc>(8U<esc>(s1p_v0s0b4113T

CG Omega Bold

abcDEfghijjÃÂ°ÇÑî¿£\$ê#\$\$@[]^'_{|}~123
<esc>(8U<esc>(s1p_v0s3b4113T

CG Omega Italic

abcDEfghijjÃÂ°ÇÑî¿£\$ê#\$\$@[]^'_{|}~123
<esc>(8U<esc>(s1p_v1s0b4113T

CG Omega Bold Italic

abcDEfghijjÃÂ°ÇÑî¿£\$ê#\$\$@[]^'_{|}~123
<esc>(8U<esc>(s1p_v1s3b4113T

Coronet

abcDEfghijjÃÂ°ÇÑî¿£\$ê#\$\$@[]^'_{|}~123
<esc>(8U<esc>(s1p_v1s0b4116T

Clarendon

abcDEfghijjÃÂ°ÇÑî¿£\$ê#\$\$@[]^'_{|}~123
<esc>(8U<esc>(s1p_v4s3b4140T

Univers

abcDEfghijjÃÂ°ÇÑî¿£\$ê#\$\$@[]^'_{|}~12
<esc>(8U<esc>(s1p_v0s0b4148T

Univers Bold

abcDEfghijjÃÂ°ÇÑî¿£\$ê#\$\$@[]^'_{|}~12
<esc>(8U<esc>(s1p_v0s3b4148T

Univers Italic

abcDEfghijjÃÂ°ÇÑî¿£\$ê#\$\$@[]^'_{|}~12
<esc>(8U<esc>(s1p_v1s0b4148T

Univers Bold Italic

abcDEfghijjÃÂ°ÇÑî¿£\$ê#\$\$@[]^'_{|}~12
<esc>(8U<esc>(s1p_v1s3b4148T

Univers Condensed

abcDEfghijjÃÂ°ÇÑî¿£\$ê#\$\$@[]^'_{|}~123
<esc>(8U<esc>(s1p_v4s0b4148T

Univers Bold Condensed	<code>abcDEfghijĂÂ°ÇÑî¿£\$ê#\$\$@[]^'{}~123</code> <esc>(8U<esc>(s1p_v4s3b4148T
Univers Condensed Italic	<code>abcDEfghijĂÂ°ÇÑî¿£\$ê#\$\$@[]^'{}~123</code> <esc>(8U<esc>(s1p_v5s0b4148T
Univers Bold Condensed Italic	<code>abcDEfghijĂÂ°ÇÑî¿£\$ê#\$\$@[]^'{}~123</code> <esc>(8U<esc>(s1p_v5s3b4148T
AntiqOlive	<code>abcDEfghijĂÂ°ÇÑî¿£\$ê#\$\$@[]^'{}~123</code> <esc>(8U<esc>(s1p_v0s0b4168T
AntiqOlive Bold	<code>abcDEfghijĂÂ°ÇÑî¿£\$ê#\$\$@[]^'{}~1</code> <esc>(8U<esc>(s1p_v0s3b4168T
AntiqOlive Italic	<code>abcDEfghijĂÂ°ÇÑî¿£\$ê#\$\$@[]^'{}~123</code> <esc>(8U<esc>(s1p_v1s0b4168T
Garamond Antique	<code>abcDEfghijĂÂ°ÇÑî¿£\$ê#\$\$@[]^'{}~123</code> <esc>(8U<esc>(s1p_v0s0b4197T
Garamond Bold	<code>abcDEfghijĂÂ°ÇÑî¿£\$ê#\$\$@[]^'{}~123</code> <esc>(8U<esc>(s1p_v0s3b4197T
Garamond Italic	<code>abcDEfghijĂÂ°ÇÑî¿£\$ê#\$\$@[]^'{}~123</code> <esc>(8U<esc>(s1p_v1s0b4197T
Garamond Bold Italic	<code>abcDEfghijĂÂ°ÇÑî¿£\$ê#\$\$@[]^'{}~123</code> <esc>(8U<esc>(s1p_v1s3b4197T
Marigold	<code>abcDEfghijĂÂ°ÇÑî¿£\$ê#\$\$@[]^'{}~123</code> <esc>(8U<esc>(s1p_v0s0b4297T
Albertus Semi-Bold	<code>abcDEfghijĂÂ°ÇÑî¿£\$ê#\$\$@[]^'{}~123</code> <esc>(8U<esc>(s1p_v0s1b4362T
Albertus Extra Bold	<code>abcDEfghijĂÂ°ÇÑî¿£\$ê#\$\$@[]^'{}~1</code> <esc>(8U<esc>(s1p_v0s4b4362T
Arial	<code>abcDEfghijĂÂ°ÇÑî¿£\$ê#\$\$@[]^'{}~123</code> <esc>(8U<esc>(s1p_v0s0b16602T
Arial Bold	<code>abcDEfghijĂÂ°ÇÑî¿£\$ê#\$\$@[]^'{}~123</code> <esc>(8U<esc>(s1p_v0s3b16602T
Arial Italic	<code>abcDEfghijĂÂ°ÇÑî¿£\$ê#\$\$@[]^'{}~123</code> <esc>(8U<esc>(s1p_v1s0b16602T
Arial Bold Italic	<code>abcDEfghijĂÂ°ÇÑî¿£\$ê#\$\$@[]^'{}~123</code> <esc>(8U<esc>(s1p_v1s3b16602T
Times New Roman	<code>abcDEfghijĂÂ°ÇÑî¿£\$ê#\$\$@[]^'{}~123</code> <esc>(8U<esc>(s1p_v0s0b16901T
Times New Roman Bold	<code>abcDEfghijĂÂ°ÇÑî¿£\$ê#\$\$@[]^'{}~123</code> <esc>(8U<esc>(s1p_v0s3b16901T
Times New Roman Italic	<code>abcDEfghijĂÂ°ÇÑî¿£\$ê#\$\$@[]^'{}~123</code> <esc>(8U<esc>(s1p_v1s0b16901T
Times New Roman Bold Italic	<code>abcDEfghijĂÂ°ÇÑî¿£\$ê#\$\$@[]^'{}~123</code> <esc>(8U<esc>(s1p_v1s3b16901T
Symbol	<code>abcXΔEφγηιφΥΓ≥×∂÷≠≈|Σ#∃≡[]⊥{}~123</code> <esc>(19M<esc>(s1p_v0s0b16686T

Wingdings

À Á Â Ã Ä Å Æ Ç È É Ê Ë Ì Í Î Ï Ñ Ò Ó Ô Õ Ö × Ø Ù Ú Û Ü Ý Þ ß à á â ã
<esc>(579L<esc>(s1p_v0s0b31402T

Courier Bold

À Á Â Ã Ä Å Æ Ç È É Ê Ë Ì Í Î Ï Ñ Ò Ó Ô Õ Ö × Ø Ù Ú Û Ü Ý Þ ß à á â ã
<esc>(8U<esc>(s0p_h0s3b4099T

Courier Italic

À Á Â Ã Ä Å Æ Ç È É Ê Ë Ì Í Î Ï Ñ Ò Ó Ô Õ Ö × Ø Ù Ú Û Ü Ý Þ ß à á â ã
<esc>(8U<esc>(s0p_h1s0b4099T

Courier Bold Italic

À Á Â Ã Ä Å Æ Ç È É Ê Ë Ì Í Î Ï Ñ Ò Ó Ô Õ Ö × Ø Ù Ú Û Ü Ý Þ ß à á â ã
<esc>(8U<esc>(s0p_h1s3b4099T

Letter Gothic

À Á Â Ã Ä Å Æ Ç È É Ê Ë Ì Í Î Ï Ñ Ò Ó Ô Õ Ö × Ø Ù Ú Û Ü Ý Þ ß à á â ã
<esc>(8U<esc>(s0p_h0s0b4102T

Letter Gothic Bold

À Á Â Ã Ä Å Æ Ç È É Ê Ë Ì Í Î Ï Ñ Ò Ó Ô Õ Ö × Ø Ù Ú Û Ü Ý Þ ß à á â ã
<esc>(8U<esc>(s0p_h0s3b4102T

Letter Gothic Italic

À Á Â Ã Ä Å Æ Ç È É Ê Ë Ì Í Î Ï Ñ Ò Ó Ô Õ Ö × Ø Ù Ú Û Ü Ý Þ ß à á â ã
<esc>(8U<esc>(s0p_h1s0b4102T

Bar Code Scalable Fonts (PCL)

Codabar

À Á Â Ã Ä Å Æ Ç È É Ê Ë Ì Í Î Ï Ñ Ò Ó Ô Õ Ö × Ø Ù Ú Û Ü Ý Þ ß à á â ã
<esc>(5Y<esc>(s1p_v4s0b0T

Codabar Condensed

À Á Â Ã Ä Å Æ Ç È É Ê Ë Ì Í Î Ï Ñ Ò Ó Ô Õ Ö × Ø Ù Ú Û Ü Ý Þ ß à á â ã
<esc>(5Y<esc>(s1p_v24s0b0T

Codabar Expanded

À Á Â Ã Ä Å Æ Ç È É Ê Ë Ì Í Î Ï Ñ Ò Ó Ô Õ Ö × Ø Ù Ú Û Ü Ý Þ ß à á â ã
<esc>(0Y<esc>(s1p_v0s-5b0T

Barcode 3 of 9 Thin

À Á Â Ã Ä Å Æ Ç È É Ê Ë Ì Í Î Ï Ñ Ò Ó Ô Õ Ö × Ø Ù Ú Û Ü Ý Þ ß à á â ã
<esc>(0Y<esc>(s1p_v0s-3b0T

Barcode 3 of 9 Light

À Á Â Ã Ä Å Æ Ç È É Ê Ë Ì Í Î Ï Ñ Ò Ó Ô Õ Ö × Ø Ù Ú Û Ü Ý Þ ß à á â ã
<esc>(0Y<esc>(s1p_v0s0b0T

Barcode 3 of 9

À Á Â Ã Ä Å Æ Ç È É Ê Ë Ì Í Î Ï Ñ Ò Ó Ô Õ Ö × Ø Ù Ú Û Ü Ý Þ ß à á â ã
<esc>(0Y<esc>(s1p_v0s1b0T

Barcode 3 of 9 Semi-Bold

À Á Â Ã Ä Å Æ Ç È É Ê Ë Ì Í Î Ï Ñ Ò Ó Ô Õ Ö × Ø Ù Ú Û Ü Ý Þ ß à á â ã
<esc>(0Y<esc>(s1p_v0s5b0T

Barcode 3 of 9 Black

À Á Â Ã Ä Å Æ Ç È É Ê Ë Ì Í Î Ï Ñ Ò Ó Ô Õ Ö × Ø Ù Ú Û Ü Ý Þ ß à á â ã
<esc>(4Y<esc>(s1p_v0s-3b0T

Interleaved 2 of 5 Light

À Á Â Ã Ä Å Æ Ç È É Ê Ë Ì Í Î Ï Ñ Ò Ó Ô Õ Ö × Ø Ù Ú Û Ü Ý Þ ß à á â ã
<esc>(4Y<esc>(s1p_v0s0b0T

Interleaved 2 of 5

À Á Â Ã Ä Å Æ Ç È É Ê Ë Ì Í Î Ï Ñ Ò Ó Ô Õ Ö × Ø Ù Ú Û Ü Ý Þ ß à á â ã
<esc>(4Y<esc>(s1p_v0s1b0T

Interleaved 2 of 5 Semi-Bold

À Á Â Ã Ä Å Æ Ç È É Ê Ë Ì Í Î Ï Ñ Ò Ó Ô Õ Ö × Ø Ù Ú Û Ü Ý Þ ß à á â ã
<esc>(4Y<esc>(s1p_v0s3b0T

Interleaved 2 of 5 Bold

À Á Â Ã Ä Å Æ Ç È É Ê Ë Ì Í Î Ï Ñ Ò Ó Ô Õ Ö × Ø Ù Ú Û Ü Ý Þ ß à á â ã
<esc>(4Y<esc>(s1p_v4s-3b0T

Interleaved 2 of 5 Light Condensed

Interleaved 2 of 5 Condensed



Interleaved 2 of 5 Semi-Bold Condensed



Interleaved 2 of 5 Condensed Bold



MSI Plessey



UPC/EAN



UPC/EAN Bold



UPC/EAN Condensed



UPC/EAN Condensed Bold



UPC/EAN Expanded



UPC/EAN Expanded Bold



PostNet



Code 128



Code 128 Bold



Code 128 Condensed



Code 128 Condensed Bold



Code 128 Expanded



Code 128 Expanded Bold



OCR Scalable Fonts (PCL)

OCR-B



OCR-A



LetterGothic	ABCDEFGabcdefg0123456789[ ]{|!@#%&^*?<>~"
LetterGothic Bold	ABCDEFGabcdefg0123456789[ ]{|!@#%&^*?<>~"
LetterGothic Bold Slanted	<i>ABCDEFGabcdefg0123456789[]{ !@#%&^*?<>~"</i>
LetterGothic Slanted	<i>ABCDEFGabcdefg0123456789[]{ !@#%&^*?<>~"</i>
ITC Lubalin Graph Book *	ABCDEFGabcdefg0123456789[]|!@#%&^*?<>~"
ITC Lubalin Graph Book Oblique *	<i>ABCDEFGabcdefg0123456789[] !@#%&^*?<>~"</i>
ITC Lubalin Graph Demi *	ABCDEFGabcdefg0123456789[]|!@#%&^*?<>~"
ITC Lubalin Graph Demi Oblique *	<i>ABCDEFGabcdefg0123456789[] !@#%&^*?<>~"</i>
Marigold *	ABCDEFGabcdefg0123456789[]|!@#%&^*?<>~"
ITC Mona Lisa Recut *	ABCDEFGabcdefg0123456789[]|!@#%&^*?<>~"
Monaco □	ABCDEFGabcdefg0123456789□{|!@#%&^*?<>~"
New Century Schoolbook Bold †	ABCDEFGabcdefg0123456789[]|!@#%&^*?<>~"
New Century Schoolbook Bold Italic †	<i>ABCDEFGabcdefg0123456789[] !@#%&^*?<>~"</i>
New Century Schoolbook Italic †	<i>ABCDEFGabcdefg0123456789[] !@#%&^*?<>~"</i>
New Century Schoolbook Roman †	ABCDEFGabcdefg0123456789[]|!@#%&^*?<>~"
NewYork □	ABCDEFGabcdefg0123456789[]{|!@#%&^*?<>~"
Optima †	ABCDEFGabcdefg0123456789[]|!@#%&^*?<>~"
Optima Bold †	ABCDEFGabcdefg0123456789[]|!@#%&^*?<>~"
Optima Bold Italic †	<i>ABCDEFGabcdefg0123456789[] !@#%&^*?<>~"</i>
Optima Italic †	<i>ABCDEFGabcdefg0123456789[] !@#%&^*?<>~"</i>
Oxford *	ABCDEFGabcdefg0123456789[]|!@#%&^*?<>~"
Palatino Bold †	ABCDEFGabcdefg0123456789[]|!@#%&^*?<>~"
Palatino Bold Italic †	<i>ABCDEFGabcdefg0123456789[] !@#%&^*?<>~"</i>
Palatino Italic †	<i>ABCDEFGabcdefg0123456789[] !@#%&^*?<>~"</i>
Palatino Roman †	ABCDEFGabcdefg0123456789[]|!@#%&^*?<>~"
Stempel Garamond Bold †	ABCDEFGabcdefg0123456789[]|!@#%&^*?<>~"
Stempel Garamond Bold Italic †	<i>ABCDEFGabcdefg0123456789[] !@#%&^*?<>~"</i>
Stempel Garamond Italic †	<i>ABCDEFGabcdefg0123456789[] !@#%&^*?<>~"</i>
Stempel Garamond Roman †	ABCDEFGabcdefg0123456789[]|!@#%&^*?<>~"
ITC Symbol *	ABXΔEΦΓαβχδεφγ0123456789[]{|!@#%&^*?<>~∇
Tekton •	ABCDEFGabcdefg0123456789[]{|!@#%&^*?<>~"
Times Bold †	ABCDEFGabcdefg0123456789[]|!@#%&^*?<>~"
Times Bold Italic †	<i>ABCDEFGabcdefg0123456789[] !@#%&^*?<>~"</i>
Times Italic †	<i>ABCDEFGabcdefg0123456789[] !@#%&^*?<>~"</i>
Times Roman †	ABCDEFGabcdefg0123456789[]|!@#%&^*?<>~"
Times New Roman †	ABCDEFGabcdefg0123456789[]{|!@#%&^*?<>~"
Times New Roman Bold †	ABCDEFGabcdefg0123456789[]|!@#%&^*?<>~"
Times New Roman Bold Italic †	<i>ABCDEFGabcdefg0123456789[] !@#%&^*?<>~"</i>
Times New Roman Italic †	<i>ABCDEFGabcdefg0123456789[] !@#%&^*?<>~"</i>
Univers †	ABCDEFGabcdefg0123456789[]|!@#%&^*?<>~"

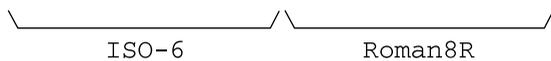
Symbol Sets Supported

This section provides a list to the character code tables for the characters in each symbol set.

Character Code Tables

■ Roman-8 (R8)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0			0	@	P	'	p				-	á	Ä	Á	Þ	
1		!	1	A	Q	a	q				À	Ý	ê	ï	Ä	þ
2		"	2	B	R	b	r				Á	ý	ó	ø	ä	·
3		#	3	C	S	c	s				È	°	ú	Æ	Ð	μ
4		\$	4	D	T	d	t				Ê	Ç	á	à	ð	¶
5		%	5	E	U	e	u				Ë	ç	é	í	Í	¼
6		&	6	F	V	f	v				Ï	Ñ	ó	ø	ì	-
7		'	7	G	W	g	w				Ï	ñ	ú	æ	Ó	¼
8		(	8	H	X	h	x				´	ì	à	Ä	Ö	½
9		)	9	I	Y	i	y				˘	í	è	ï	Ö	ª
A		*	:	J	Z	j	z				ˆ	ò	ò	Ö	ö	°
B		+	;	K	[	k	{				ˆ	£	ù	Ü	Š	«
C		,	<	L	\	l	|				ˆ	¥	ä	É	š	■
D		-	=	M	]	m	}				ˆ	§	ë	ï	Ú	»
E		.	>	N	^	n	~				ˆ	f	ö	ß	ÿ	±
F		/	?	O	_	o	⌘				£	c	ü	Ö	ÿ	



■ ISO 8859/1 Latin 1

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0			0	@	P	`	p				°	À	Ā	ä	ð	
1		!	1	A	Q	a	q				ı	±	Á	Ñ	á	ñ
2		"	2	B	R	b	r				²	Â	Ò	â	ò	
3		#	3	C	S	c	s				£	³	Ã	Ó	ã	ó
4		\$	4	D	T	d	t				¤	´	Ä	Ô	ä	ô
5		%	5	E	U	e	u				¥	µ	Å	Ö	å	ö
6		&	6	F	V	f	v				|	¶	Æ	Ö	æ	ö
7		'	7	G	W	g	w				§	·	Ç	×	ç	÷
8		(	8	H	X	h	x				¨	.	È	Ø	è	ø
9		)	9	I	Y	i	y				©	ı	É	Ù	é	ù
A		*	:	J	Z	j	z				ª	º	Ê	Ú	ê	ú
B		+	;	K	[	k	{				«	»	Ë	Û	ë	û
C		,	<	L	\	l	|				¬	¼	Ì	Ü	ì	ü
D		-	=	M	]	m	}				-	½	Í	Ý	í	ý
E		.	>	N	^	n	~				®	¾	Î	Þ	î	þ
F		/	?	O	_	o	☒				¯	¿	Ï	ß	ï	ÿ

ECMA94L

ECMA94R

■ ISO 8859/2 Latin 2

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0			0	@	P	`	p				°	Á	Ā	ä	ð	
1		!	1	A	Q	a	q				À	á	Á	Ñ	á	ñ
2		"	2	B	R	b	r				˘	.	Â	Ò	â	ò
3		#	3	C	S	c	s				Ł	ł	Ã	Ó	ã	ó
4		\$	4	D	T	d	t				¤	´	Ä	Ô	ä	ô
5		%	5	E	U	e	u				Ł	ł	Ĺ	Õ	ĺ	õ
6		&	6	F	V	f	v				Š	š	Ć	Ö	ć	ö
7		'	7	G	W	g	w				§	˘	Ç	×	ç	÷
8		(	8	H	X	h	x				¨	.	Č	Ř	č	ř
9		)	9	I	Y	i	y				Š	š	É	Ù	é	ù
A		*	:	J	Z	j	z				Ş	ş	Ê	Ú	ê	ú
B		+	;	K	[	k	{				Ť	ť	Ë	Û	ë	û
C		,	<	L	\	l	|				Ž	ž	Ě	Ü	ě	ü
D		-	=	M	]	m	}				-	˘	Í	Ý	í	ý
E		.	>	N	^	n	~				Ž	ž	Î	Ť	î	ť
F		/	?	O	_	o	☒				Ž	ž	Ď	ß	ď	·

ECMA94L

I8859L2

■ ISO 8859/9 Latin 5

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0			0	@	P	`	p				°	Ř	Ď	ř	ď	
1		!	1	A	Q	a	q			Å	å	Á	Ñ	á	ñ	
2		"	2	B	R	b	r			˘	˙	Â	Ń	â	ń	
3		#	3	C	S	c	s			Ł	ł	Ă	Ó	ă	ó	
4		\$	4	D	T	d	t			ı	ı	Ä	Ö	ä	ö	
5		%	5	E	U	e	u			Ł	ł	Í	Ó	í	ó	
6		&	6	F	V	f	v			Š	š	Ć	Ö	ś	ö	
7		'	7	G	W	g	w			§	˘	Ç	×	ç	÷	
8		(	8	H	X	h	x			˙	˘	Č	Ř	č	ř	
9		)	9	I	Y	i	y			Š	š	É	Ú	é	ú	
A		*	:	J	Z	j	z			Ş	ş	Ë	Ú	ë	ú	
B		+	;	K	[	k	{			Ť	ť	Ë	Ú	ě	ů	
C		,	<	L	\	l	|			Ž	ž	Ë	Ú	ě	ů	
D		-	=	M	]	m	}			-	˘	Í	Ý	í	ý	
E		.	>	N	^	n	~			Ž	ž	İ	Ť	ı	ı	
F		/	?	O	_	o	⊞			Ž	ž	Đ	ß	đ	·	

ECMA94L
I8859L5

■ PC-8 Code Page 437

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	▶		0	@	P	`	p	Ç	É	á	⊞	⊞	⊞	⊞	⊞	⊞
1	☉	◀	!	1	A	Q	a	q	ü	æ	ı	⊞	⊞	⊞	⊞	⊞
2	☉	⬆	"	2	B	R	b	r	é	Æ	ó	⊞	⊞	⊞	⊞	⊞
3	♥	!!	#	3	C	S	c	s	â	ô	ú	|	|	⊞	⊞	⊞
4	♦	¶	\$	4	D	T	d	t	ä	ö	ñ	⊞	⊞	⊞	⊞	⊞
5	♣	§	%	5	E	U	e	u	à	ò	Ñ	⊞	⊞	⊞	⊞	⊞
6	♠	-	&	6	F	V	f	v	á	ú	ª	⊞	⊞	⊞	⊞	⊞
7	•	‡	'	7	G	W	g	w	ç	ù	º	⊞	⊞	⊞	⊞	⊞
8	◼	↑	(	8	H	X	h	x	é	ÿ	ı	⊞	⊞	⊞	⊞	⊞
9	◊	↓	)	9	I	Y	i	y	ë	Ö	⊞	⊞	⊞	⊞	⊞	⊞
A	◼	→	*	:	J	Z	j	z	è	Û	⊞	⊞	⊞	⊞	⊞	⊞
B	♂	←	+	;	K	[	k	{	ı	ç	½	⊞	⊞	⊞	⊞	⊞
C	♀	⊞	,	<	L	\	l	|	ı	£	¼	⊞	⊞	⊞	⊞	⊞
D	♪	↔	-	=	M	]	m	}	ı	¥	ı	⊞	⊞	⊞	⊞	⊞
E	♫	▲	.	>	N	^	n	~	Ä	Pt	«	⊞	⊞	⊞	⊞	⊞
F	⊞	▼	/	?	O	_	o	⊞	Å	f	»	⊞	⊞	⊞	⊞	⊞

PC-8L
PC-8R

■ PC-8 Danish/Norwegian

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0		▶		0	@	P	`	p	Ç	É	á	⋮	Ⓕ	Ⓖ	α	≡
1	☉	◀	!	1	A	Q	a	q	ü	æ	í	⊞	Ⓕ	Ⓗ	β	±
2	☉	‡	"	2	B	R	b	r	é	Æ	ó	⊞	Ⓕ	Ⓗ	Γ	≥
3	♥	!!	#	3	C	S	c	s	â	ô	ú	|	Ⓕ	Ⓖ	π	≤
4	♦	¶	\$	4	D	T	d	t	ä	ö	ñ	Ⓕ	Ⓕ	Ⓖ	Σ	∫
5	♣	§	%	5	E	U	e	u	à	ò	Ñ	≡	+	Ⓗ	σ	∫
6	♠	-	&	6	F	V	f	v	å	û	ö	Ⓕ	Ⓗ	Ⓗ	μ	÷
7	•	‡	'	7	G	W	g	w	ç	ù	Ö	Ⓕ	Ⓕ	Ⓗ	τ	≈
8	☐	↑	(8	H	X	h	x	ê	ÿ	¿	Ⓕ	Ⓕ	Ⓗ	Φ	°
9	○	↓)	9	I	Y	i	y	ë	Ö	ä	Ⓕ	Ⓗ	Ⓕ	Θ	·
A	☉	→	*	:	J	Z	j	z	è	Ü	Ä		Ⓕ	Ⓗ	Ω	·
B	♂	←	+	:	K	[k	{	ï	ø	ℓ	Ⓕ	Ⓗ	⊞	δ	√
C	♀	Ⓕ	,	<	L	\	l		i	£	ˆ	Ⓕ	Ⓗ	⊞	∞	n
D	♫	↔	-	=	M]	m	}	i	Ø	i	Ⓕ	Ⓗ	Ⓗ	φ	²
E	♫	▲	.	>	N	^	n	˘	Ä	L	³	Ⓕ	Ⓗ	Ⓗ	ε	▪
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PC-8L

PC-8DNR

■ PC-850 Multilingual (PM)

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1	☉	◀	!	1	A	Q	a	q	ü	æ	í	⊞	Ⓕ	Ð	β	±
2	☉	‡	"	2	B	R	b	r	é	Æ	ó	⊞	Ⓕ	Ê	Ô	_
3	♥	!!	#	3	C	S	c	s	â	ô	ú		Ⓕ	Ë	Ò	¼
4	♦	¶	\$	4	D	T	d	t	ä	ö	ñ	Ⓕ	Ⓕ	È	ø	¶
5	♣	§	%	5	E	U	e	u	à	ò	Ñ	Á	+	ı	Ö	§
6	♠	-	&	6	F	V	f	v	å	û	ª	Ä	ä	Í	μ	÷
7	•	‡	'	7	G	W	g	w	ç	ù	º	À	Ã	Î	þ	.
8	☐	↑	(8	H	X	h	x	ê	ÿ	¿	◊	Ⓕ	Ï	þ	°
9	○	↓)	9	I	Y	i	y	ë	Ö	®	Ⓕ	Ⓗ	Ⓕ	Ú	ˆ
A	☉	→	*	:	J	Z	j	z	è	Ü	Ⓕ		Ⓕ	Ⓗ	Û	·
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C	♀	Ⓕ	,	<	L	\	l		i	£	¼	Ⓕ	Ⓗ	⊞	ý	³
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PC-850L

PC-850R

■ PC-852 Latin 2

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2	☹	‡	"	2	B	R	b	r	é	í	ó	⊞	⊞	Đ	Ó	˘
3	♥	!!	#	3	C	S	c	s	â	ô	ú			È	Ñ	˘
4	♦	¶	\$	4	D	T	d	t	ä	ö	Å	⊞	⊞	d	ñ	˘
5	♣	§	%	5	E	U	e	u	ú	Ł	ł	+	+	Ń	ń	§
6	♠	-	&	6	F	V	f	v	é	ı	Ž	Ž	Ž	ı	š	÷
7	•	‡	'	7	G	W	g	w	ç	Š	š	È	ä	ı	š	.
8	▣	↑	(8	H	X	h	x	ı	ş	£	£	£	è	Ř	°
9	○	↓)	9	I	Y	i	y	ë	Ö	ö	⊞	⊞	⊞	Ú	˘
A	☉	→	*	:	J	Z	j	z	Ó	Ü				ı	ı	.
B	♂	←	+	;	K	[k	{	ó	Ť	ť	⊞	⊞	▣	Ů	ů
C	♀	⌞	,	<	L	\	l		ı	ı	Č	č	⊞	⊞	ý	Ř
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E	♯	▲	.	>	N	^	n	˘	Ä	×	«	ž	⊞	Ů	ı	▪
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PC-850L

PC-852R

■ PC-Turkish

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1	☺	◀	!	1	A	Q	a	q	ü	æ	í	⊞	⊞	β	±	
2	☹	‡	"	2	B	R	b	r	é	Æ	ó	⊞	⊞	Γ	≥	
3	♥	!!	#	3	C	S	c	s	â	ô	ú			π	≤	
4	♦	¶	\$	4	D	T	d	t	ä	ö	ñ	⊞	⊞	Σ	[
5	♣	§	%	5	E	U	e	u	à	ò	Ñ	⊞	⊞	σ	J	
6	♠	-	&	6	F	V	f	v	á	ú	Ğ	⊞	⊞	μ	÷	
7	•	‡	'	7	G	W	g	w	ç	ù	ğ	⊞	⊞	τ	≈	
8	▣	↑	(8	H	X	h	x	é	ı	ı	⊞	⊞	≠	Φ	°
9	○	↓)	9	I	Y	i	y	ë	Ö	ö	⊞	⊞	⊞	θ	.
A	☉	→	*	:	J	Z	j	z	è	Ü				ı	ı	.
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E	♯	▲	.	>	N	^	n	˘	Ä	Ş	«	⊞	⊞	▣	€	▪
F	⊞	▼	/	?	O	_	o	△	Ä	ş	»	⊞	⊞	▣	∩	

PC-8L

PC-8TKR

■ Windows Latin 1

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
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2		"	2	B	R	b	r	,	'	²	Â	Ò	â	ò		
3		#	3	C	S	c	s	f	“	£	³	Ã	Ó	ã	ó	
4		\$	4	D	T	d	t	„	”	¤	´	Ä	Ö	ä	ö	
5		%	5	E	U	e	u	...	•	¥	µ	Å	Õ	å	õ	
6		&	6	F	V	f	v	†	-		¶	Æ	Ö	æ	ö	
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9)	9	I	Y	i	y	‰	™	©	ı	É	Ù	é	ù	
A		*	:	J	Z	j	z	Š	š	ª	º	Ê	Ú	ê	ú	
B		+	;	K	[k	{	<	>	«	»	Ë	Û	ë	û	
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└──────────────────┘
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 Win31L Win31R

■ Windows Latin 2

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3		#	3	C	S	c	s	f	“	Ł	ł	Ã	Ó	ã	ó	
4		\$	4	D	T	d	t	„	”	¤	´	Ä	Ö	ä	ö	
5		%	5	E	U	e	u	...	•	Ł	ł	Ł	Ó	ł	ó	
6		&	6	F	V	f	v	†	-		¶	Ć	Ö	ć	ö	
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B		+	;	K	[k	{	<	>	«	»	Ë	Û	ë	û	
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└──────────────────┘
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 Win31L Win31L2R

■ Windows Latin 5

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Win31L

Win31L5R

■ DeskTop

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ISO-6

DeskTPR

■ PS Text

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VentrIL

PSTextR

■ Ventura International

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VentrIL

VentrIR

■ Ventura US

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VentrIL

VentrUR

■ Microsoft Publishing

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MicPubL

MicPubR

■ Math-8

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4		∞	4	Δ	T	δ	υ				←	⊥	⊗	∃	┌	┐
5		÷	5	E	Φ	ε	φ				↑	U	∧	┌	┐	
6		α	6	Z	X	ξ	χ				⇒	∩	∇	φ	φ	
7		'	7	H	Ψ	η	ψ				↓	∈	∇	┌	┐	↓
8		(8	Θ	Ω	θ	ω				=	∃	¬	∅	∇	∇
9)	9	I	∇	ι	∂				±	∉	∅	∞		>
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C		,	<	M	≤	μ	≡				↔	∩	•	∩	-	<
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Math8L
Math8R

■ PS Math

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5		%	5	E	Y	ε	υ				∞	∞	⊕	Π	Σ	J
6		&	6	Φ	ς	φ	ω				f	∂	∅	√	┌	┐
7		∃	7	Γ	Ω	γ	ω				♣	•	∩	·		
8		(8	H	Ξ	η	ξ				♦	+	U	¬	┌	┐
9)	9	I	Ψ	ι	ψ				♥	≠	∩	∧	┌	┐
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PSMathL
PSMathR

■ Ventura Math

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ECMA94L I8859L6R

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MacTxtL
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■ Symbol Font

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WingdgL

WingdgR

■ PC-860 Portugal

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C	♀	⊥	,	<	L	\	l		N	ε	υ	⊥	⊥	⊥	Ή	ⁿ
D	♫	↔	-	=	M]	m	}	Ξ	ζ	φ	⊥	⊥	⊥	Ί	²
E	♫	▲	.	>	N	^	n	˘	O	η	χ	⊥	⊥	⊥	Ό	▪
F	☼	▼	/	?	O	_	o	△	Π	θ	ψ	⊥	⊥	⊥	Υ	

PC-8L

PC-8GR

■ OCR-A

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0			0	@	P	r	p									
1		!	1	A	Q	a	q									
2		"	2	B	R	b	r									
3		#	3	C	S	c	s									
4		\$	4	D	T	d	t									
5		%	5	E	U	e	u									
6		&	6	F	V	f	v									
7		'	7	G	W	g	w									
8		(	8	H	X	h	x									
9		)	9	I	Y	i	y									
A		*	:	J	Z	j	z									
B		+	;	K	[	k	{									
C		,	<	L	\	l	|									
D		-	=	M	]	m	}									
E		.	>	N	^	n	~									
F		/	?	O	_	o										

■ OCR-B

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0			0	@	P	'	p									
1		!	1	A	Q	a	q									
2		"	2	B	R	b	r									
3		#	3	C	S	c	s									
4		\$	4	D	T	d	t									
5		%	5	E	U	e	u									
6		&	6	F	V	f	v									
7		'	7	G	W	g	w									
8		(8	H	X	h	x									
9)	9	I	Y	i	y									
A		*	:	J	Z	j	z									
B		+	;	K	[k	{									
C		,	<	L	\	l										
D		-	=	M]	m	}									
E		.	>	N	^	n	~									
F		/	?	O	_	o										

■ 3 of 9 Barcode

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0																
1																
2																
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4																
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7																
8																
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A																
B																
C																
D																
E																
F																

■ UPC/EAN Barcode

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0																
1																
2																
3																
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5																
6																
7																
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A																
B																
C																
D																
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■ Code 128 Barcode

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
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A																
B																
C																
D																
E																
F																

■ Interleaved 2 of 5 Barcode

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0																
1																
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3																
4																
5																
6																
7																
8																
9																
A																
B																
C																
D																
E																
F																

■ Codabar (Upright)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0																
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A																
B																
C																
D																
E																
F																

■ Codabar (Condensed)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0																
1																
2																
3																
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5																
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9																
A																
B																
C																
D																
E																
F																

■ Codabar (Expanded)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0																
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2																
3																
4																
5																
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7																
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A																
B																
C																
D																
E																
F																

■ MSI Plessey

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0																
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2																
3																
4																
5																
6																
7																
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9																
A																
B																
C																
D																
E																
F																

■ PostNet

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0																
1																
2																
3			■													
4																
5																
6																
7																
8																
9																
A																
B																
C																
D																
E																
F																

ISO Substitution Table

	0	1	2	3	4	5	6	7
0				0	@	P	'	p
1			!	1	A	Q	a	q
2			"	2	B	R	b	r
3			#	3	C	S	c	s
4			\$	4	D	T	d	t
5			%	5	E	U	e	u
6			&	6	F	V	f	v
7				7	G	W	g	w
8			(	8	H	X	h	x
9			)	9	I	Y	i	y
A			*	:	J	Z	j	z
B			+	;	K	[	k	{
C			,	<	L	\	l	|
D			-	=	M	]	m	}
E			.	>	N	^	n	~
F			/	?	O	_	o	

The shaded characters in the table are replaced with the corresponding ones in the following table according to the graphic set used.

GRAPHIC SET NAME	CHARACTER CODE										
	23	40	5B	5C	5D	5E	60	7B	7C	7D	7E
ISO_USA	#	@	[	\	\]	^	'	{	|	}	~
ISO_UK	£	@	[	\	\]	^	`	{	|	}	—
ISO_S/F	#	É	Ä	Ö	Å	Ü	é	ä	ö	å	ü
ISO_N/D	#	@	Æ	Ø	Å	^	`	æ	ø	å	—
ISO_JPN	#	@	[	¥	]	^	`	{	|	}	—
ISO_GER	#	§	Ä	Ö	Ü	^	`	ä	ö	ü	ß
ISO_FRC	£	à	°	ç	§	^	μ	é	ù	è	¨
ISO_ITY	£	§	°	ç	é	^	ù	à	ò	è	ì
ISO_SPN	£	§	i	Ñ	¿	^	`	°	ñ	ç	~

Specifications

This section lists the specifications for the printer.

Hardware Specifications

Type	Desktop page printer
Printing Process	Electrophotographic printing (roller fixing)
Printing Speed	20* pages per minute (A4, landscape orientation, 600dpi) *Note: Printing speed may be reduced depending on the orientation, size, type of paper, printed sheet number setting etc.
Warm-up Time	Less than 30 seconds (at 20 °C (68 °F), without expansion RAM)
First Print Output Time:	About 11* seconds (A4, landscape orientation, 600dpi, 20 °C (68 °F), cassette feed, face-down delivery) *Note: First print output time may be slowed down with settings such as paper orientation, size, type, fixing mode.
Paper Sizes	250 sheet cassette (standard, option) A3, B4, A4, B5-JIS, A5, Ledger, Legal, Letter, Executive Maximum capacity: approximately 250 sheets 80 g/m ² (21 lb.) Multi-purpose tray Width: 76.2 to 297mm (3" to 11 3/4"), Length: 98 to 431.8mm (3 7/8" to 17"), Maximum capacity: approximately 100 sheets 80 g/m ² (21 lb.)
Paper Delivery Method	Face-down
Paper Delivery Tray Capacity	Face-down delivery tray: approximately 250 sheets 80 g/m ² (21 lb.) bond paper.
Noise Level (printer body only) (By standby position) (Declared noise emissions in accordance with ISO 9296)	During standby (600dpi) 38dB max.(A) During printing (600dpi) 53dB max.(A)
Environmental requirements for operation (printer body only)	Operating temperature: 7.5 to 32.5 °C (45.5 to 90.5 °F) Humidity: 5 to 90% RH (no condensation)

Environmental requirements for storage (printer body only)	Storage temperature:	0 to 35 °C (32 to 95 °F)
	Humidity:	5 to 95% RH (no condensation)
Power Source	220-240V (50 Hz)	
Power Consumption (20 °C or 68 °F):	During printing:	Approximately 448W(average)*
	During standby:	Approximately 118W(average)*
	During sleep mode:	Approximately 16W or less*
		Max. 850W or less**
	*Note: Value for normal state	
	**Note: Except when all options installed/ Instantaneous peak value on startup.	
Mass	Printer body:	Approximately 13.5 kg (30.0 lb.)
	EP-65 cartridge:	Approximately 2 kg (4.4 lb.)
	Canon 250 sheet paper cassette:	Approximately 1.5 kg (3.3 lb.)
	Canon 250 sheet paper feeder (including the 250 sheet paper cassette)*:	Approximately 5 kg (11.0 lb.)
		* Optional product sold separately.

Controller Specifications

CPU	Power PC405 (200 MHz)
Memory (RAM) capacity	Standard 8MB
	Extendable to Max. memory 72 MB with optional expansion RAM
Host Interface	One parallel connector (Centronics compliant/ bidirectional)
	One USB connector (V 1.1)
	Two expansion board slots
User Interface	16 characters, 2 lines
	4 indicators
	6 operation keys
RAM Socket	1
ROM Sockets	3

Software Specifications

Printer Languages	Standard: PCL [®] 5e, 6
	Option: Adobe PostScript [®] 3 [™]
Resident Fonts	45 scalable fonts, 32 TrueType fonts, 9 bitmap fonts
Optional Fonts	136 fonts for optional Canon Adobe PostScript 3 Module A-65

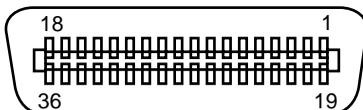
Interface Specifications

This section list the specifications for the parallel interface and printer cable that should be used with the printer.

Parallel Interface (Centronics Compliant)

Location of signal lines and pins

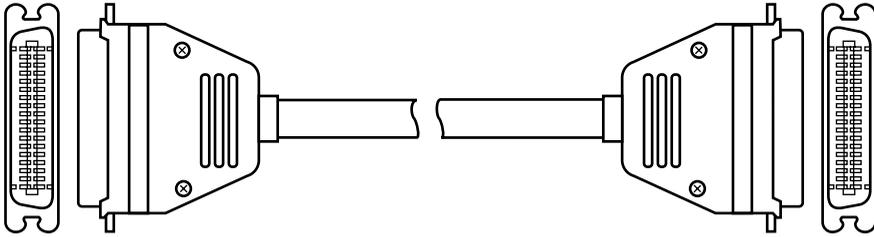
Pin number	Signal	Pin number	Signal
1	STROBE	19	GND (STROBE)
2	DATA0	20	GND (DATA0)
3	DATA1	21	GND (DATA1)
4	DATA2	22	GND (DATA2)
5	DATA3	23	GND (DATA3)
6	DATA4	24	GND (DATA4)
7	DATA5	25	GND (DATA5)
8	DATA6	26	GND (DATA6)
9	DATA7	27	GND (DATA7)
10	ACK	28	GND (PERROR, SELECT, ACK)
11	BUSY	29	GND (BUSY, FAULT)
12	PERROR	30	GND (AUTOFD, SELECT IN, INIT)
13	SELECT	31	INIT
14	AUTOFD	32	FAULT
15	AUXOUT1	33	AUXOUT2
16	Logic GND	34	AUXOUT3
17	Chassis GND	35	AUXOUT4
18	Peripheral Logic High	36	SELECT IN



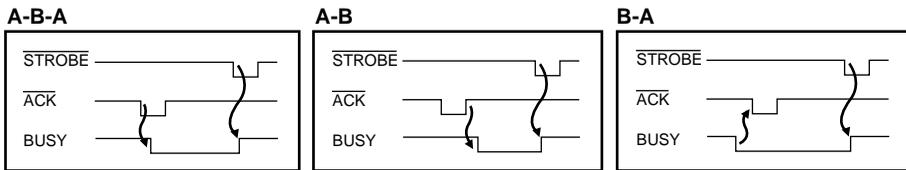
 NOTE

- <AUXOUT> is a signal output for extension, not used at present.

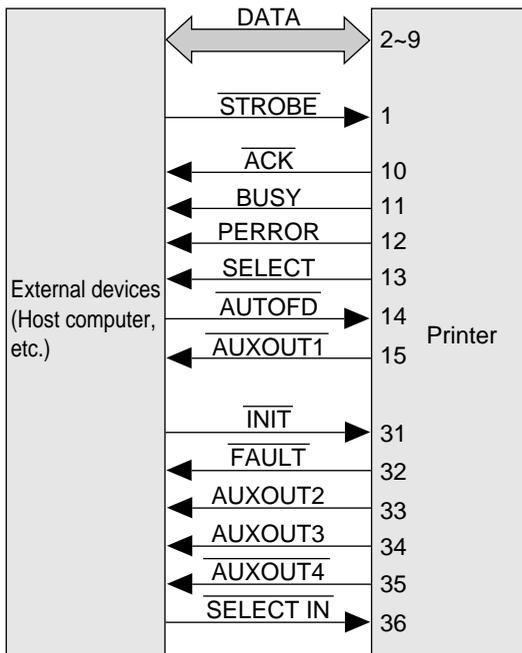
Connector and Cable



Timing Chart



Parallel Connections



Glossary

Automatic Continue

A function that automatically cancels errors 10 seconds after they occur to allow printing to continue. Only certain errors can be automatically skipped.

Automatic Image Refinement

Automatically refines your printed text and illustrations by smoothing the jagged edges on curves and diagonal lines.

Automatic Personality Switching

If you install the optional Adobe PostScript 3 module, your printer can switch automatically between PCL or PostScript depending on the data it receives.

Banding

The process of creating a whole page of data in strips. The banding method uses less memory because the data is in a compressed format before strip composition.

Bit

An acronym for binary digit written as either a 0 or 1.

Bitmap

A graphic image made up of a matrix of dots called pixels (picture elements). The printer can print bitmapped fonts and graphics.

Bitmapped Fonts

Fonts created with bitmap images made up of a matrix of dots. Vector fonts, however, are generated with mathematical formulas.

Bold

A printed character that is wider and darker than a normal character. Bold characters are usually used in titles and headings.

Buffer

An area of the printer memory that holds data sent from the computer. The buffer holds an entire page until it is printed.

Bug

A defect that adversely affects the operation of a computer system.

Byte

The amount of memory space to store a single character, number, letter or symbol. One byte consists of 8 binary digits (bits). 1024 bytes is one kilobyte.

Character

In computer terminology, characters usually include letters of the alphabet, numbers, symbols, punctuation marks, etc.

Character Code Table

Letters and symbols to be printed are sent in the form of codes from the host computer to the printer. The codes are composed of two-digit characters such as 23 or 5B (hexadecimal). A character code table shows the correspondence between the host computer and printer. The arrangement of characters in a table are determined by the arrangement of the graphic set.

Character Pitch

Commonly measured as the number of characters per inch (cpi). This term is usually applied only to fixed pitch fonts and not proportional fonts. In a fixed font, all the characters are the same width. In a proportional font, the characters are of varying width. See proportional spacing.

Character Set

The complete collection of characters and symbols that constitute all elements of a set. The printer uses these characters and symbols for printing and coding after it receives data from the printer.

Character Size

Characters are measured in point sizes where one point is $1/72$ ". For example, a 24-point font contains characters $1/3$ " ($24/72$ ") high, measured from the top of the tallest character to the tails, the bottom portions of y's and j's that descend below the text line.

Cleaning Page

Used to clean the fixing assembly. If black spots appear on the printed paper, feed a cleaning page through the printer to clean the fixing roller.

(See "Cleaning the Fixing Roller," on p.8-22)

Column Pitch

The terms column and character are often used interchangeably because 1 character occupies one column width. Columns (characters) are measured in columns per inch (cpi). Common settings are 10, 12, 15 cpi.

Command

An instruction that tells the printer to perform a function. Commands are sent to the printer through the interface cable; the printer can receive these commands only when the printer is on-line.

Configuration

The collection of settings that set up communication between the printer and host computer. When you use the printer control buttons or software application program to set up the parallel interface parameters, you are modifying the printer's configuration.

Context Saving

A memory management feature. Normally, resources downloaded to the printer for a print job are lost if the printer switches to another personality to execute another job. However, with additional memory, context saving can be turned on to hold resources in the memory, even if the printer switches to another personality. See also resource.

Control Panel

See printer control panel.

cpi

Characters per inch. (Also, columns per inch.) A unit of measurement for a fixed font. Since all the characters are the same width, one measured inch will always contain the same number of characters.

Cut Sheets

Each sheet is cut and separated. Used in copy machines and laser printers.

Data Bits

The number of bits (usually 7 or 8) contained in a packet of data that is being communicated from one computer to another via a network or modem.

dB

Stands for decibel, a unit of measurement for the intensity of sound generated by equipment. The lower the measurement, the lower the noise level.

Default

A setting or value that remains in effect until you turn the printer on or off or change the numeric setting. The printing environment is set at the factory before the printer is shipped. These settings are called factory defaults and remain in effect until you change them. If you change a setting, this becomes the default and remains in effect even after you turn the printer off. This new setting is called simply a default or power-on default. You can restore the factory defaults by initialising the printer with a cold reset.

DIMM

DIMM stands for dual in-line memory module. Memory DIMMs are optional plug-in attachments for ROM sockets on the main circuit board inside the printer. There are two ROM sockets provided for ROM DIMMs. The A-65 module for Adobe PostScript 3 and the Flash ROM. There is also a RAM DIMM socket which can hold up to 64 MB of RAM memory.

Dot Matrix

A pattern of dots arranged in a matrix used to form characters. The larger the matrix, the finer the character. For example, because a 1200-dot matrix can use more dots; it can produce a character more refined than one from a 600-dot matrix.

Dot Matrix Printer

A non-letter quality impact printer in which the print head consists of tiny solenoids that drive small wires onto an ink ribbon to form patterns of dots on paper between the print head and platen.

Downloaded Fonts

See soft fonts.

dpi

Stands for dots per inch, a unit of measurement for indicating a printer's resolution.

Emulation

A feature that allows the printer to emulate or take on the personality of another printer. If you install the optional A-65 module for Adobe PostScript 3 software, your printer can emulate a PostScript printer.

EP-65 cartridge

Canon's original cartridge containing toner, a photosensitive drum, a cleaning unit. Stable and high quality printing can be always secured as the whole unit is replaced when toner is depleted. Replacement work is very simple. This disposable toner cartridge has a service life of about 10,000 pages (A4 document, printing ratio: Approximately 5%, density: factory shipment default).

Error Message

A message that appears in the display when a problem occurs. Some minor messages can be skipped by pressing Go.

Error Skip

See Automatic Continue.

Factory Default

A value programmed into the printer's memory at the factory before shipping. The value is permanently stored in ROM (read only memory) and cannot be modified by the user. Unless you change the settings, factory default settings are enabled every time you turn the printer on. See also default.

Fixed Spacing

Used in a fixed font where all the characters are of the same width. Fixed spacing is also referred to as pitch and is measured in characters per inch.

Flash ROM

Additional memory that is used to store font and macro data. Use of additional Flash ROM memory requires the purchase and installation of the Canon Flash ROM Module FR-65.

Font

A complete set of characters of the same size and style; all the letters, numbers, punctuation marks and symbols have a similar appearance.

Font List

Lists all the fonts currently available in the printer. Available PCL fonts and PostScript fonts are listed separately.

Form Feed

A printer command that stops printing on a page and ejects the page from the printer. If this command is not sent from the host computer at page end, unprinted data may remain in the printer. If a print job is completed and the On Line indicator continues to blink, there is unprinted data in the print. Press Shift and Go to print all the data remaining in the printer.

Free RAM

The total amount of RAM currently available in the printer for downloading fonts from the host computer, registering overlay forms, etc.

Fuser Assembly

Fixes the toner onto the paper or other media with heat and pressure. Located inside the printer, the fuser assembly reaches temperatures of 195°C (413°F) during operation.

Graphic

A drawing or diagram created with a graphics application program.

Graphic Set

The rule that defines the correspondence between the host computer and the printer, and determines the arrangement of characters in the character code table.

Handshake

A communication signal between the host computer and the printer. Before the host computer sends data to the printer, the computer sends a signal to the printer that asks if the printer is ready to receive the data. When the printer is ready, it sends a signal that it is ready to receive. After the data transmission is completed, signals to confirm the successful completion of the transfer are sent between the host computer and the printer. This form of communication is called a handshake.

Host Computer

The computer connected to a printer and used to drive the printer when it is on-line.

Initialize

Returning the printer to its factory set values. These are the initial values programmed into the printer's memory before shipping from the factory. The printing environment settings change the power-on defaults. When you initialize the printer, you erase all power-on defaults and restore the printer to its factory defaults.

Interface

The connection between two devices, such as your printer and host computer, that allows them to communicate. Your printer has a parallel and a USB interface.

Interface Cable

A cable used to connect your printer and host computer. This is also referred to as a printer cable. You must use a parallel cable for the parallel interface or a USB cable for the USB interface.

ISO

Stands for International Organization for Standardization (or International Standards Organization) which has standardized codes for information exchange.

Job

The collection of data that goes into printing. A job begins with a start command at the beginning of the first page of a document and ends with an end command on the last page. Once a job has started, no other job can be executed until it is complete.

Job Timeout

A feature that terminates a job if nothing is received by the printer for a specified length of time. For example, if a job is suspended before it is completed and the printer does not receive the printer end command, the printer will terminate the job automatically to free the printer for the next job.

Kilobyte

1,024 bytes of information or storage space. The kilobyte is often rounded to an even 1,000 and is abbreviated in this documentation as KB.

Landscape

See Orientation.

Macro

A file holding commands to perform a task. A macro saved as a start-up macro can be executed from the printer control panel.

Megabyte

1,024 kilobytes (1,048,576 bytes) of information or storage space. Abbreviated as MB in this manual.

Memory

The printer's data storage area. See also NVRAM, RAM, and ROM.

Menu

A collection of items you can select for setting or changing. The items of the menus can be displayed one at a time, in the display of the printer control panel.

Multi-purpose Tray

A tray that folds out from your printer and can hold a variety of print media, including cut sheet standard paper, envelopes, adhesive labels and transparencies.

NVRAM

Stands for Non-Volatile Random Access Memory. This type of memory retains data even after the power is turned off and turned on again. It is used in order to store menu function settings in the printer. It is designed to store the latest setting.

Oblique

A type of print style. Oblique is the same as italic in some font styles.

Off-line

When the printer is off-line, the communication between a personal computer and a printer is cut off. The printer cannot receive the print data from the personal computer. Select paper types and use menu function always in off-line state. When the printer is off-line, the On Line indicator on the control panel is turned off.

(See "Turning the Printer On/Off," on p.2-2)

On-line

When the printer is on-line, a personal computer and a printer are communicated to each other. The printer can receive the print data from the personal computer. Printing should be performed in on-line state. You cannot select paper types and set menu functions in this state. When the printer is on-line, the On Line indicator on the control panel is on.

(See "Turning the Printer On/Off," on p.2-2)

Orientation

Refers to the direction of printing on the page. Printing across the width of the page is called portrait orientation and printing across the length of the page is called landscape orientation.

Paper Jam

When a sheet of paper stops in the printer. A jam must be removed before you can continue printing.

Parallel Interface

Transmits data in one-byte segments along a parallel cable.

Parity

Parity is set to odd, even or none. It checks to see if data has been sent correctly or not.

PCL

See Personality.

Personality

A personality refers to the languages supported by the printer. The printer supports two personalities: PCL and PostScript. For a printer to respond properly to the print data stream, it must have the correct personality that can interpret the data and execute the commands as they come down from the host computer.

Pitch

The number of characters per measured inch. The term pitch is applied only to fixed fonts.

Portrait

See Orientation.

PostScript

See Personality.

Print Density

The relative thickness of printed lines. The thicker the line, the darker it looks.

Printable Area

The area of a page on which the printer can reproduce text or graphics. There is a very small border around the edge of the paper where nothing can be printed.

Printer Control Panel

The panel on the front of the printer that consists of the indicators, buttons and display. Use the printer control panel to take the printer off-line and on-line and to change the printing environment settings.

Printer Driver

A program that sets up and controls communication between the printer and the host computer.

Printing Environment

Printing conditions such as font selection, line spacing, page format, number of copies, etc. Use your software application program to set up how your printer operates. However, if this is not possible, you can also use the printer control panel buttons to set up the printing environment.

Proportional Spacing

Printed text where each character is of a different width. For example, if you look closely at a proportionally spaced text you see that a W is much wider than an I. Documents prepared using proportional spacing have a more professional look.

Protocol

Values required for communication between the host computer and printer. Use the printer control panel buttons to set up the printing environment parameters for the parallel interface.

PS

Stands for proportional spacing (also PostScript).

RAM

Stands for "Random Access Memory", volatile memory that is erased every time the printer is turned off. It is used for system work memory and receipt buffer in the printer. Optional expansion RAM is available to expand the memory capacity of the printer.

ROM

Stands for “Read Only Memory”, a type of printer memory that is not deleted even if the printer is turned off. System program is written in the ROM of the printer. It is also used for optional control ROM.

USB Connector

USB (Universal Serial Bus) is a type of interface for connecting all kinds of peripherals to computers. It is used to connect printers, keyboards, mice, etc. for Windows 95/98/Me and Windows 2000 based personal computers and Macintosh computers.

Resident Fonts

Fonts built into the printer. Also called internal fonts.

Resolution

The density of the dots output by a printer and expressed in dots per inch (dpi). This printer prints at 600 dpi.

Resource

Refers to any information downloaded from the host computer so the printer personality can execute a print job. Resources include information such as fonts, macros, forms and other temporary information that is lost after the printer is turned off or after it switches personalities. Also see context saving.

ROM

Stands for Read Only Memory, a type of printer memory that cannot be modified by the user and is not deleted even if the printer is turned off. The ROM holds all the factory settings programmed into the printer before it leaves the factory.

Scalable Font

A font that is not fixed in pitch, size or orientation. The character size can be scaled with a software application program to any size or orientation you want.

Shielded Cable

A cable used for data transfer, sheathed with a metallic cover to guard against electromagnetic noise generated by other equipment or energy fields.

Soft Fonts

Fonts purchased separately on disk and downloaded with software from the host computer to the printer. Soft fonts reside in the printer memory only long enough to be used for printing. They must be downloaded for every print job. On the other hand, permanent soft fonts reside in the memory until the printer is turned off. Soft fonts are not listed in a printed font list.

Software Application

A program installed and run on your computer. A word processor is the most common type of software application you can use with this printer. For every program you use, you must install the correct printer driver for your printer. For details, refer to your software application documentation.

Status Message

A message on the control display that tells you what the printer is doing. For example, READY tells you the printer is ready and waiting for a print job. Unlike error messages, status messages do not require any action.

Stroke Weight

The thickness of a character or symbol. Stroke weights are included as part of the font name, like Times Medium, Times Bold, etc.

Style

Refers to the shape of a character. The terms upright, italic, outline, etc. refer to style.

Toner

Dry, black carbon powder used to create the image on paper. The toner in your EP-65 cartridge is permanently sealed inside.

Total RAM

The total amount of random access memory available for creating print images and storing downloaded fonts and other data before they are printed. If you want to know the total RAM of your printer, print the TEST PRINT.

Translator

See Personality.

Transparency

A print media commonly referred to as film used for overhead projection presentations.

Typeface

Refers to the design of printed characters. The name of a font, like Times Roman, Helvetica, Courier, etc., is the name of the typeface design.

USB

USB (Universal Serial Bus) is a new industry-wide standard for connecting all kinds of peripherals to computers. USB enables consistent high speed transmission at 12 Megabits per second, attachment and removal of cables without any need to switch off the computer (“Hot plug”), and simple connection without fiddly setup procedures (“Plug & play”). Moreover, it can be used to connect the computer to many other devices at the same time.



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